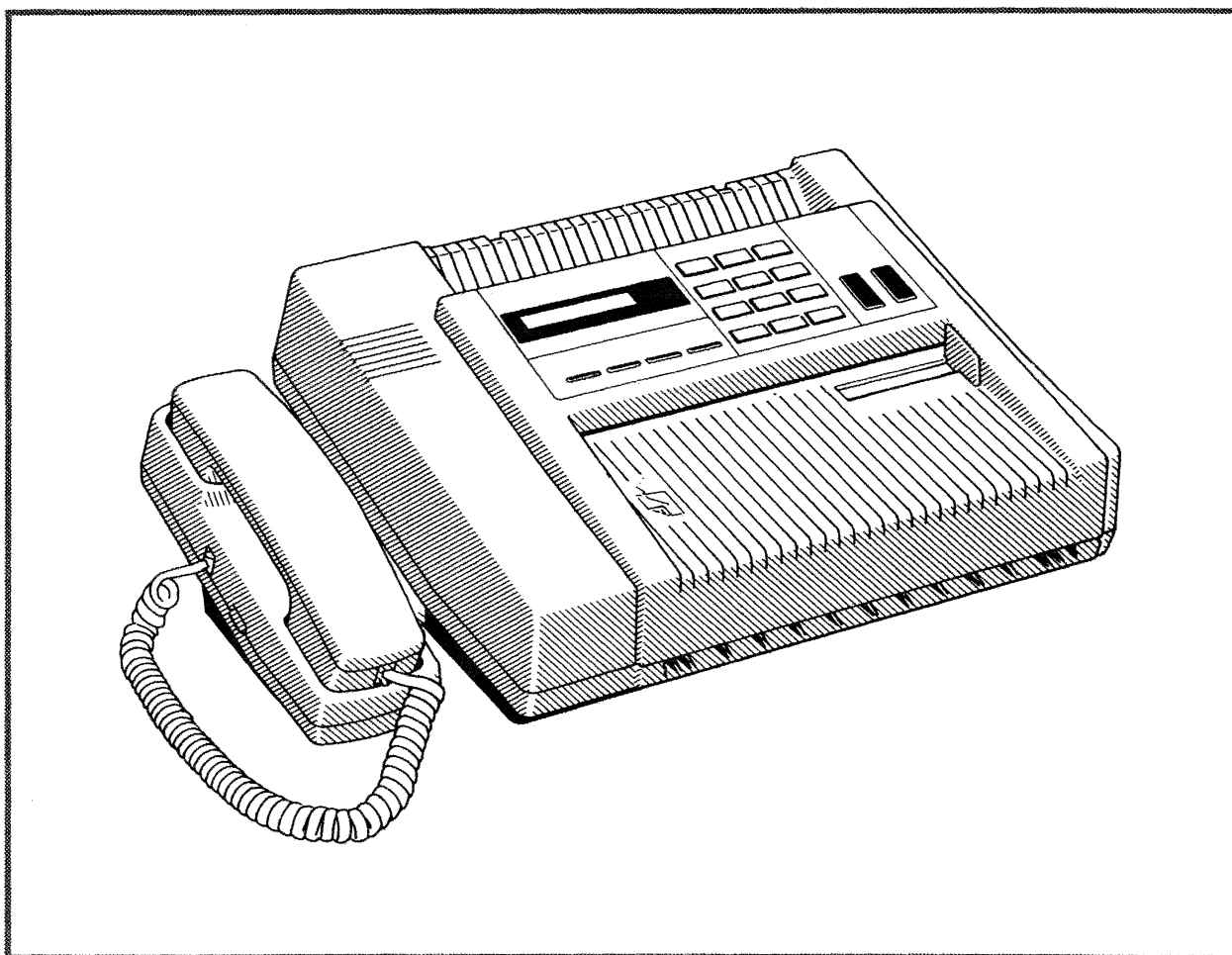


brother

FAX-220

Owner's Manual



This unit generates, uses and can radiate radio frequency energy and if not installed and used in accordance with the Owner's Manual, may cause interference to radio and television reception. It has been tested and found to comply with the limits for a Class B computing device in accordance with the specifications of Subpart J of Part 15 of the FCC rules, which are designed to provide reasonable protection against such interference in a residential installation. However, there is no guarantee that interference will not occur in a particular installation. If this unit does cause interference (such as static) to radio or television reception, which can be determined by turning the unit off and on, the user is encouraged to try to correct the interference by employing one or more of the following measures:

- change the location of the receiving antenna (indoor type)
- move the unit away from the radio or TV
- plug the unit into a different outlet so that the unit and the radio or TV are on different branch circuits.

If necessary, the user should consult the dealer or an experienced radio/TV technician for additional suggestions. The user may find the following booklet prepared by the Federal Communications Commission helpful: "How to Identify and Resolve Radio-TV Interference Problems". This booklet is available from the U.S. Government Printing Office, Washington, D.C., 20402, Stock No. 004-000-00345-4.

Brother cannot accept any financial or other responsibilities that may be the result of your use of this information, including direct, indirect, special or consequential damages. There are no warranties extended or granted by this document.

The serial number may be found on the label affixed to the bottom of the unit. For your convenience, note this number below and retain this Owner's Manual to serve as a permanent record of your purchase, in the event of a theft or fire or for future reference.

MODEL NO. FAX-220 SERIAL NO. _____
 NAME OF DEALER _____
 DATE OF PURCHASE _____

This equipment complies with Part 68 of the FCC Rules. On the rear panel of this equipment is a label that contains, among other information, the FCC Registration Number and Ringer Equivalence Number (REN) for this equipment. You must, upon request, provide this information to your telephone company.

Ask your telephone company or installer to install the jack suitable for your device if such is not available.

The REN is useful to determine the quantity of devices you may connect to your telephone line and still have those devices ring when your telephone number is called. In most, but all areas, the sum of the RENs of all devices connected to one line should not exceed five (5.0). To be certain of the number of devices you may connect to your line, as determined by the REN, you should contact your local telephone company to determine the maximum REN for your calling area.

If your telephone equipment causes harm to the telephone network, the Telephone Company may discontinue your service temporarily. If possible, they will notify you in advance. But if advanced notice isn't practical, you will be notified as soon as possible. You will be informed of your right to file a complaint with the FCC.

Your Telephone Company may make changes in its facilities, equipment, operations or procedures that could affect the proper functioning of your equipment. If they do, you will be notified in advance to give you an opportunity to maintain uninterrupted telephone service.

If you experience trouble with this telephone equipment, please contact the manufacturer's authorized service agency for information on obtaining service or repair. The telephone company may ask that you disconnect this equipment from the network until the problem has been corrected or until you are sure that the equipment is not malfunctioning.

WARNING:

For protection against the risk of electrical shock, always disconnect all cables from the wall outlet before servicing, modifying or installing the equipment.

This equipment may not be used on coin service provided by the Telephone Company nor connected to party lines.

IMPORTANT FCC NOTICES

This equipment is hearing-aid compatible.

**WHEN PROGRAMMING EMERGENCY NUMBERS
AND/OR
MAKING TEST CALLS TO EMERGENCY NUMBERS**

1. **Remain on line and briefly explain to the dispatcher the reason for the call before hanging up.**
 2. **Perform such activities in the off-peak hours, such as early morning or late evening.**
-

IMPORTANT SAFETY INSTRUCTIONS

1. Read all of these instructions.
2. Save them for later reference.
3. Follow all warnings and instructions marked on the product.
4. Unplug this product from the wall outlet before cleaning. Do not use liquid or aerosol cleaners, Use a damp cloth for cleaning.
5. Do not use this product near water.
6. Do not place this product on an unstable cart, stand, or table. The product may fall, causing serious damage to the product.
7. Slots and openings in the cabinets and the back or bottom are provided for ventilation; to ensure reliable operation of the product and to protect it from overheating. These openings must not be blocked or covered. The openings should never be blocked by placing the product on a bed, sofa, rug or other similar surface. This product should never be placed near or over a radiator or heat register. This product should not be placed in a built-in installation unless proper ventilation is provided.
8. This product should be operated from the type of power source indicated on the marking label. If you are not sure of the type of power available, consult your dealer or local power company.

9. This product is equipped with a 3-wire grounding type plug, a plug having a third (grounding) pin. This plug will only fit into a grounding-type power outlet. This is a safety measure/ If you are unable to insert the plug into the outlet, contact your electrician to replace your obsolete outlet. Do not defeat the purpose of the grounding-type plug.
10. Do not allow anything to rest on the power cord. Do not locate this product where persons will walk on the cord.
11. If an extension cord is used with this product, make sure that the total of the ampere ratings on the product plugged into the extension cord do not exceed the extension cord ampere rating. Also, make sure that the total of all products plugged into the wall outlet does not exceed 15 amperes.
12. Never push objects of any kind into this product through cabinet slots as they may be dangerous voltage points or short out parts that could result in a risk of fire or electric shock. Never spill liquid of any kind on the product.
13. Do not attempt to service this product yourself, as opening or removing covers may expose you to dangerous voltage points or other risks.. Refer all servicing to service personnel.
14. Unplug this product from the wall outlet and refer servicing to qualified service personnel under the following conditions:
 - A. When the power cord or plug is damaged or frayed.
 - B. If liquid has been spilled into the product.
 - C. If the product has been exposed to rain or water.
 - D. If the product does not operate normally when the operating instructions are followed. Adjust only those controls that are covered by the operating instructions since improper adjustment or other controls may result in damage and will often require extensive work by a qualified technician to restore the product to normal operation.
 - E. If the product has been dropped or the cabinet has been damaged.

Definitions and explanations of certain terms which you will encounter in the **Owner's Manual**

ADF	Automatic Document Feeder – allows the insertion of multiple originals for faxing or copying (5 originals).
CCITT GROUP 3	A standard for facsimile transmission established by the CCITT – the International Telegraph and Telephone Consultative Committee. Machines meeting this standard can transmit a standard page at speeds of under 60 seconds.
CONVENIENCE COPIER	A copier used to make occasional copies.
DIGITAL FACSIMILE	Facsimile that transmits images in the form of discrete data bits.
FAX PASSWORD	A security passcode that permits transmission to your unit only by units with the same matching passcode.
FINE RESOLUTION	203 x 196 lines per inch – a transmission mode used by facsimile machines to transmit images containing a great deal of fine detail.
GRAY SCALE	Shades of gray (16 in the case of your unit) that are used to provide a faithful reproduction of photographic images.
ICM	Incoming message – the telephone message that is recorded on the Message Center (see below) of your facsimile unit.
KEY SYSTEM	A standard office-type telephone system where the telephones have keys for selecting lines and functions.
MESSAGE CENTER	A telephone answering system built into the facsimile unit.
OFF-HOOK	A condition where your handset is off the hook (not in the cradle).
ON-HOOK	A condition where the handset of the unit is on the hook (in the cradle).
OGM	Outgoing message – the message which you record on your Message Center and which is heard by the caller when he calls your unit (when the Message Center is on).
PBX	Private Branch Exchange – a computerized telephone switch usually found in large organizations which accepts calls from the outside, and transfers them to various extensions inside and which routes calls from the inside to the outside.
PSTN	Public Switched Telephone Network – the public lines of the telephone company.
PULSE/TONE	Types of dialing; Pulse is the rotary method, where the phone system counts pulses (clicks) to determine the number you are dialing. Tone is an audio method where the system listens to the tones to determine the number you are dialing.
RTI/TTI	RTI – Remote Terminal Identification; TTI – Transmit Terminal Identification. The phone number of your fax unit and your name/ID, which, if programmed by you, identify your unit to other fax units and may be printed out on documents received by the other parties, be displayed in their LCDs and appear in transaction journals.
STANDARD RESOLUTION	203x98 lines per inch – the transmission mode used by facsimile machines to transmit images containing typewritten or printed matter and less-involved drawings.
USOC RJ11C JACK	The standard modular single-line phone jack.

TABLE OF CONTENTS

<u>Contents</u>	<u>Page</u>
INTRODUCTION	1
PRE-INSTALLATION INSTRUCTIONS	2
Before removing the unit from the carton	2
Contents of the packing carton	2
Procedures for removing the unit from the packing carton	3
INSTALLING THE UNIT	4
I. Electrical connection	4
II. Single-line telephone connections	4
III. Multi-line telephone connections	5
IV. Inserting the recording paper roll into the unit	5
V. Inserting the original document tray	7
GETTING FAMILIAR WITH YOUR BROTHER FAX-220	8
I. The FAX-220 – parts and their functions	8
II. The control panel	8
BASIC OPERATIONS	11
I. The copy mode	11
II. How to transmit documents	11
III. How to receive documents	16
PROGRAMMING THE UNIT	18
I. Setting the date and time	18
II. Registering your fax telephone number ID	18
III. Registering your company name/destination name	20
IV. Setting up the auto dialer	22
V. Setting user switches	24
VI. The Message Center	28

Continued

Contents**Page**

ADVANCED OPERATIONS	44
I. Temporary registration settings	44
II. Setting the Fax Password	50
III. Auto redial function	50
IV. The polling function	51
V. Printing out lists	54
VI. Understanding audio signals	56
CARING FOR YOUR FAX-220	57
ERROR MESSAGES	58
TROUBLESHOOTING	60
TELEPHONE DIRECTORIES	62
SPECIFICATIONS	63



INTRODUCTION

Thank you for purchasing the Brother **FAX-220**. This **Owner's Manual** will help you derive the fullest benefits from this new, powerful but compact facsimile transceiver.

The Brother **FAX-220** is a modern, compact desktop digital facsimile unit with such features as a five (5) page automatic document feeder, an easy-to-read 16 character Liquid Crystal Display (LCD), a paper cutter and an exclusive Electronic COVERPAGE™ feature. Its performance is compatible with CCITT Group 3. Therefore, your new **FAX-220** is compatible with most modern facsimile units in the world.

The **FAX-220** is an ideal low-volume stand-alone unit or a satellite unit in a larger facsimile network. Furthermore, the unit can be used as a convenience copier and as a sophisticated business telephone .

All of the Brother **FAX-220** features can be easily learned by following step-by-step procedures listed on the following pages. As you become familiar with the features and operation of the unit, keep the Owner's Manual handy for quick references and reminders.

The **Owner's Manual** provides a step-by-step description of the procedures you should employ in unpacking, installing and learning to operate your Brother **FAX-220** facsimile unit. If you follow these instructions, you will have no problem with either the installation or the operation of the unit.

Modern digital facsimile units are extremely reliable. If you exercise the necessary care, you will enjoy years of totally trouble-free enjoyment of this unit.

Now, open the **Owner's Manual** to PRE-INSTALLATION INSTRUCTIONS (page 2) and read the material carefully.

IMPORTANT NOTE

If you wish to start using your FAX-220 **immediately upon purchase**, you can learn how to install it, use it as a transmitter or a receiver in a matter of minutes. To do so, read the following material only:

- PRE-INSTALLATION INSTRUCTIONS
- GETTING FAMILIAR WITH THE UNIT
- BASIC OPERATIONS

After you read these pages, you will be able to send and receive facsimile communications. Later, at your leisure, you can read the rest of the Owner's Manual and learn how to benefit from the **FAX-220's** many other outstanding features.

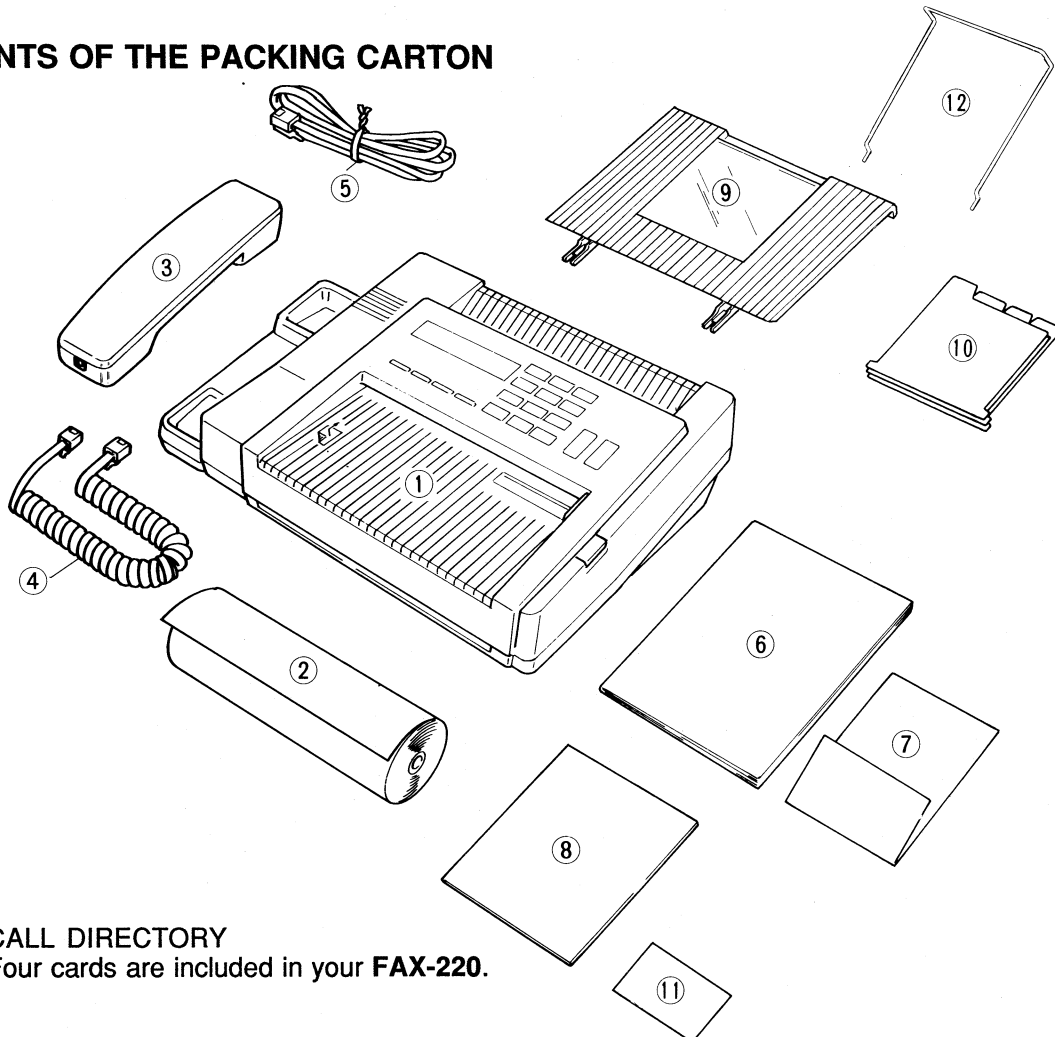
PRE-INSTALLATION INSTRUCTIONS

BEFORE REMOVING THE UNIT FROM THE CARTON

The Brother **FAX-220** is designed to operate in an office environment or at home. It is rugged, reliable and virtually maintenance-free. However, to ensure years of trouble-free performance, please observe the following precautions:

- Do not locate the unit near heaters, air conditioners, in direct sunlight or in dusty environments.
- Install the unit on a flat level surface, such as a desk, a table, a typewriter or computer stand.
- Do not locate the unit where water or chemicals are likely to splash on it.
- Select a vibration-free area of your office.
- Locate the unit within 3 feet from a telephone wall jack.
- Locate the unit within 3 feet of a standard, grounded outlet.
- Avoid plugging in the unit into an outlet which is on the same line as an air conditioner, a refrigeration unit, a copier, an electric typewriter or any other device that draws a lot of current in a relatively short period of time.

CONTENTS OF THE PACKING CARTON



NOTE: CALL DIRECTORY
Four cards are included in your **FAX-220**.

The packing carton contains:

- ① The Brother **FAX-220** unit
- ② One roll of Brother thermal recording paper
- ③ Telephone handset
- ④ Handset curled cord
- ⑤ Telephone line cord
- ⑥ Owner's Manual
- ⑦ Warranty card
- ⑧ Test Sheet
- ⑨ Original document tray
- ⑩ Call Directory insert/Quick Reference Card.
- ⑪ Wallet sized Card.
- ⑫ Wire Paper holder.

PROCEDURES FOR REMOVING THE UNIT FROM THE PACKING CARTON

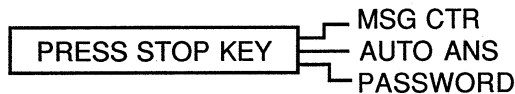
1. Carefully open the carton (see the appropriate inscription on the carton)
2. Pull out the **FAX-220** and the other devices together with the packing trays
3. Remove all packing trays and plastic from the unit
4. Take out the telephone line cord from the plastic packaging
5. Take out the telephone handset and the curled cord
6. Take out the paper roll

INSTALLING THE UNIT

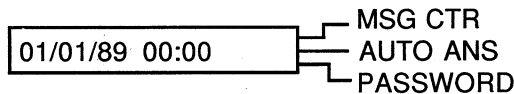
I. ELECTRICAL CONNECTION

The **FAX-220** can be plugged into any standard power (110 VAC) outlet. Make sure that the outlet is grounded and that it is not on the same line as appliances or office machines which tend to draw a lot of power in a very short period of time, such as refrigerators, copiers, etc. The **FAX-220** power requirements are listed in the SPECIFICATIONS.

After you plug in the power cord into the outlet, the LCD will display:



Press **STOP**. If you have not inserted the paper roll into the unit, "**ADD PAPER**" message appears. If you have already inserted the paper roll, the unit is ready for use. The LCD will display the date and time as follows:



This LCD reading is referred to as the "standby mode" and it indicates that the unit is ready to perform its functions. Later, we will show you how to set the date and time.

NOTE: THE **FAX-220** DOES NOT HAVE A POWER ON/OFF SWITCH.

II. SINGLE-LINE TELEPHONE CONNECTIONS

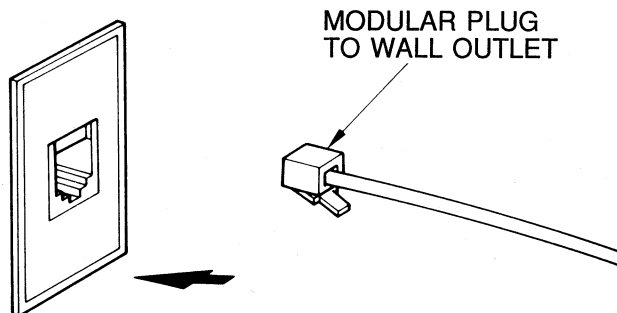
The **FAX-220** must always be connected to the power outlet prior to making the telephone line connection. Similarly, when disconnecting the unit, the telephone line connection should be removed before unplugging the unit. This procedure is necessary because the unit relies on the power outlet's ground for your protection from any possibly hazardous electrical conditions that may arise on the telephone network.

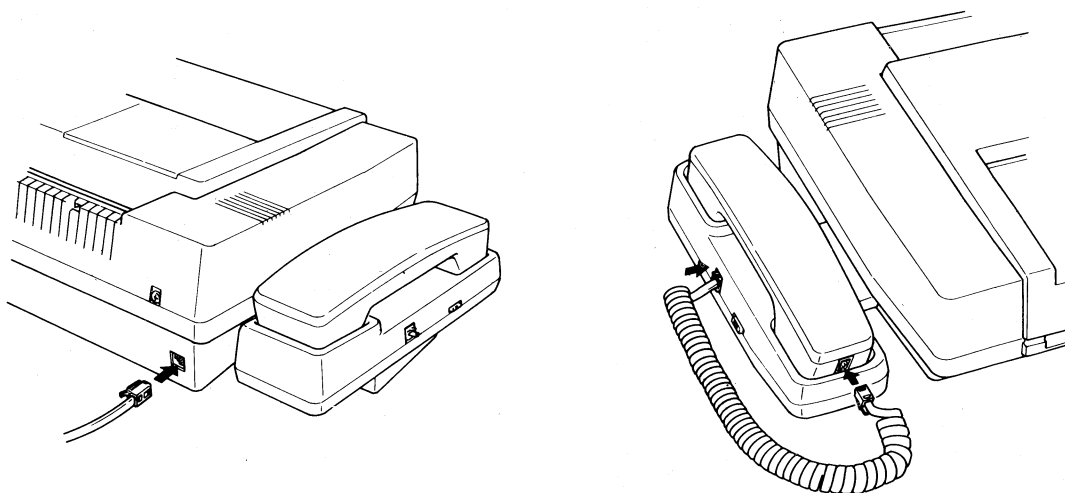
The simplest way to connect the Brother **FAX-220** unit to the public switched telephone network (phone company lines) is to use a single telephone line. The connection is particularly simple if you have a modular wall jack. The most common modular jack is referred to as the **USOC RJ11C** jack. If you have such a jack, follow the instructions below. If your wall jack is not modular, it is very easy to convert the wall plug to a modular form. Conversion is very simple and conversion kits are available from your local phone company, an electronics / computer store (e.g., Radio Shack) or the AT&T phone stores.

To connect your **FAX-220** to the telephone line, follow these steps:

- Connect one end of the curled handset cord to the handset and the second end to the **RJ7** jack on the side of the handset cradle.
- Take the telephone cord which is also included in the carton and connect one of its plugs to the **LINE** jack in the back of the **FAX-220** unit and the second plug to your modular wall jack (**USOC RJ11C**). Now, the **FAX-220** is connected to the telephone network.

Please see the illustration on the next page for the telephone connections.





If you have MODULAR PHONE JACKS (USOC RJ11C), simply plug the phone cord into the wall jack.

If you have the older 4-PRONG JACK, you must use a modular 4-prong adapter USOC RJA1X. Plug the adapter into the wall jack and then plug the phone cord into the adapter. Then, follow the instructions above.

III. MULTI-LINE TELEPHONE CONNECTIONS

Most offices have key systems or PBXs. While in many cases it is relatively easy to connect the **FAX-220** to a key system or a PBX, we suggest that you contact the organization which installed your company's telephone system and ask them to connect the **FAX-220** to the system. If the **FAX-220** is connected to a key system, ask your installer to connect the **FAX-220** to the last line on the system. This way, the **FAX-220** will not be activated by every phone call coming into your office. The preferred solution is to ask the phone company to assign a separate line to the facsimile unit. In this case, you can leave the unit on 24 hours a day and derive full benefits from its automatic, unattended operations capabilities.

IV. INSERTING THE RECORDING PAPER ROLL INTO THE UNIT

To insert the paper roll, follow the directions given below. Before reading the instructions for inserting the recording paper into the unit, please consider these important notes:

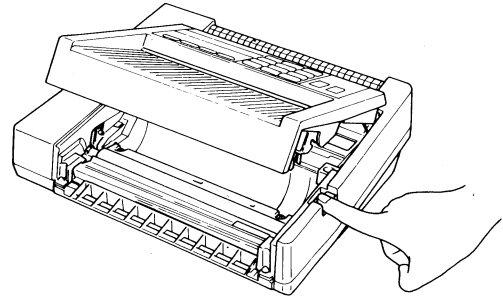
NOTE 1: The recording paper is heat-sensitive. Avoid exposure to high temperature, high humidity or direct sunlight. Keep the received documents (or copied documents) away from high temperature, direct sunlight, high humidity, alcohol, blueprints. Otherwise the documents may become discolored.

NOTE 2: The use of Brother Recording Paper is specifically recommended for this unit. The use of paper not authorized by Brother may adversely affect the unit's performance and may void Brother's product warranty.

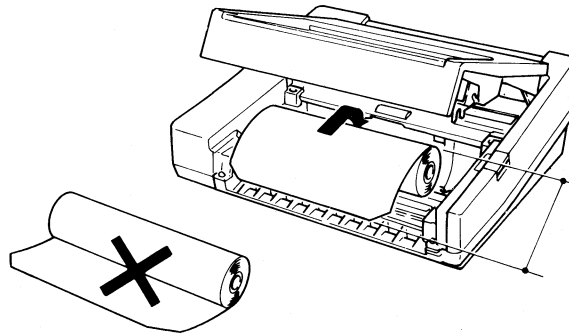
Brother Recording Paper has a red stripe indicator. Its appearance on your received or copied documents is a warning that the paper roll will be running out shortly. Replace the paper roll when you see the red stripe. Furthermore, Brother Recording Paper has a black stripe at the end of the roll. If you have not changed the paper at the appearance of the red stripe, the unit will automatically stop when the black stripe appears. This feature works only with Brother Recording Paper on Brother facsimile units. Please note that Brother Recording Paper rolls are overwound (i.e., contain extra paper) so that you are not wasting paper when you remove the roll when the indicator appears.

To insert the paper roll, follow these directions:

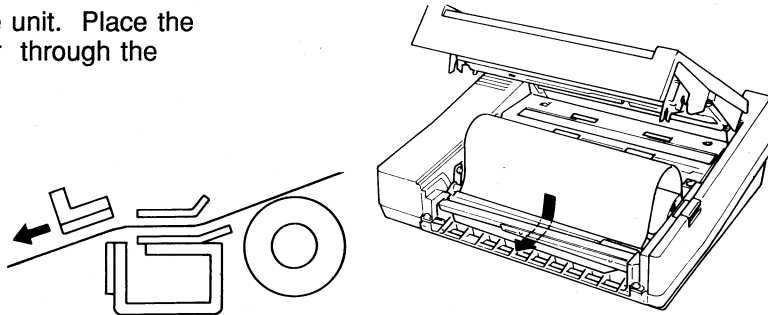
1. To open the paper cover, press the button which is located at the right edge of the top of the machine.



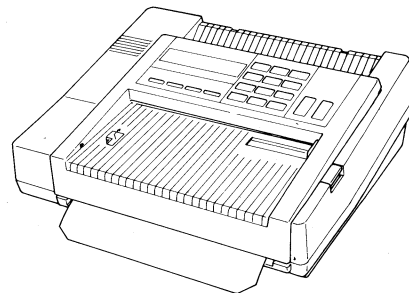
2. Hold the recording paper roll so that the free end of the paper points towards you from the top of the roll. Be sure not to set the recording paper upside-down. If this happens, you will not get any images on reception or copying.



3. Drop in the paper into the unit. Place the leading edge of the paper through the paper cutter guide.



4. Push the cover unit until you hear a click.



5. Press **STOP**. The automatic cutter will cut off excess paper and the unit will go into the standby mode (ready). The LCD will change to:

01/01/89 00:00

MSG CTR
 AUTO ANS
 PASSWORD

6. If you forget to press **STOP**, the unit will go into the standby mode as someone calls it.

V. INSERTING THE ORIGINAL DOCUMENT TRAY

The original document tray consists of document tray, Call Directory and Quick-Reference Card, and wire paper holder. The Call Directory Card and the Quick-Reference Card can be inserted into the back side of the tray in the following step.

1. Turn the tray face down. Also hold the Call Directory Card and the Quick-Reference Card face down. Insert either left or right leg (positioned at the bottom of the Cards) into the slit of the tray and then insert another leg. See Illustration 1 below.
2. Slide the Cards down along the slits. Push the upper part of the Cards below the two protrusions coming out face to face at the top middle of the tray. (The tray must still face down.) Slide the Cards down to the bottom of the slits.
3. Now turn the tray face up.

A wire paper holder also comes with this tray and can be easily installed into the tray. Locate small holes at the top of the tray. Insert the legs of the paper holder into the holes. Make sure the other end of the wire protrude upwards as shown below. Pre-installation is complete. Insert the above tray into the slots at the top of the unit as shown in the Illustration 2 below.

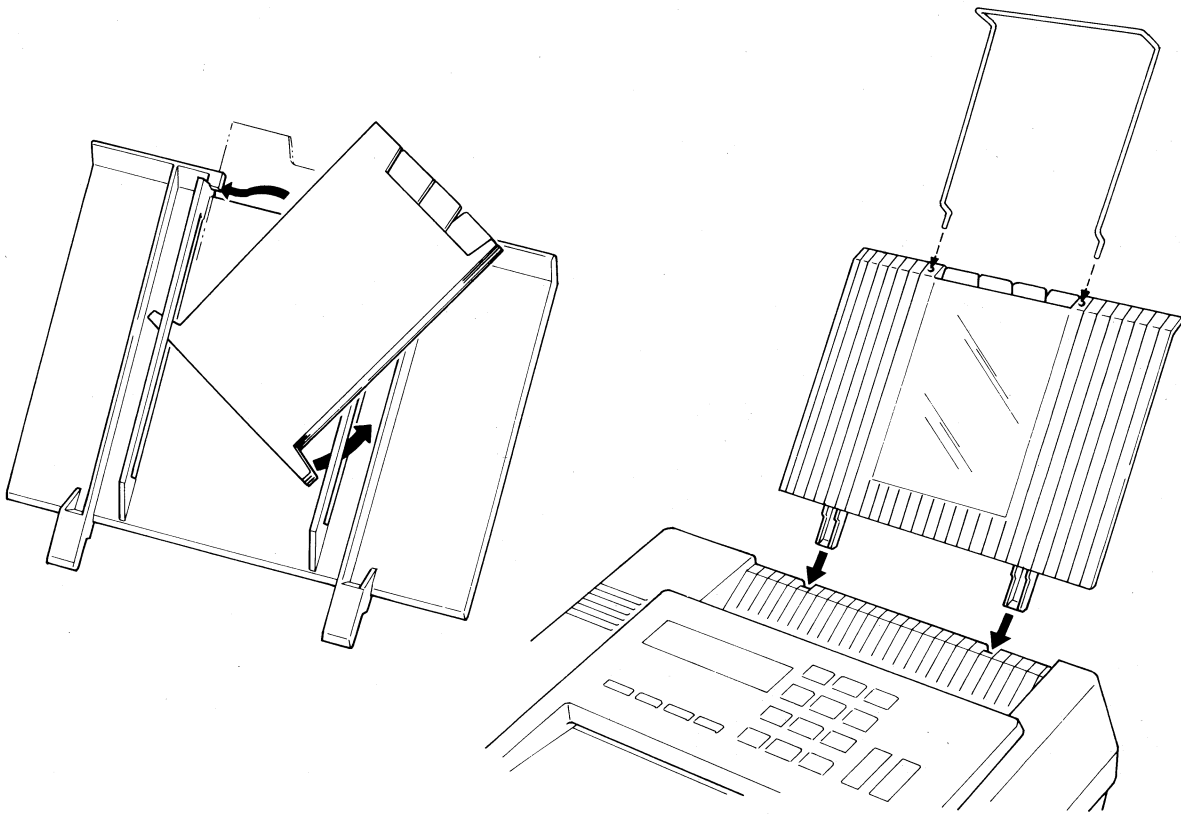


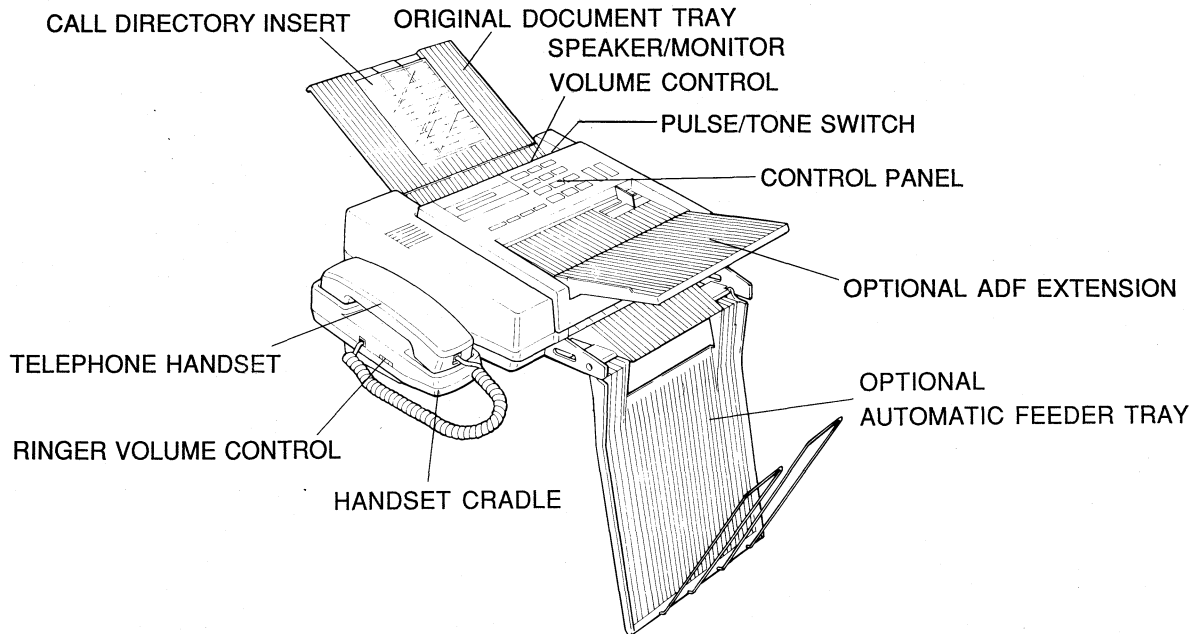
Illustration 1

Illustration 2

GETTING FAMILIAR WITH YOUR BROTHER FAX-220

I. THE FAX-220 – PARTS AND THEIR FUNCTIONS

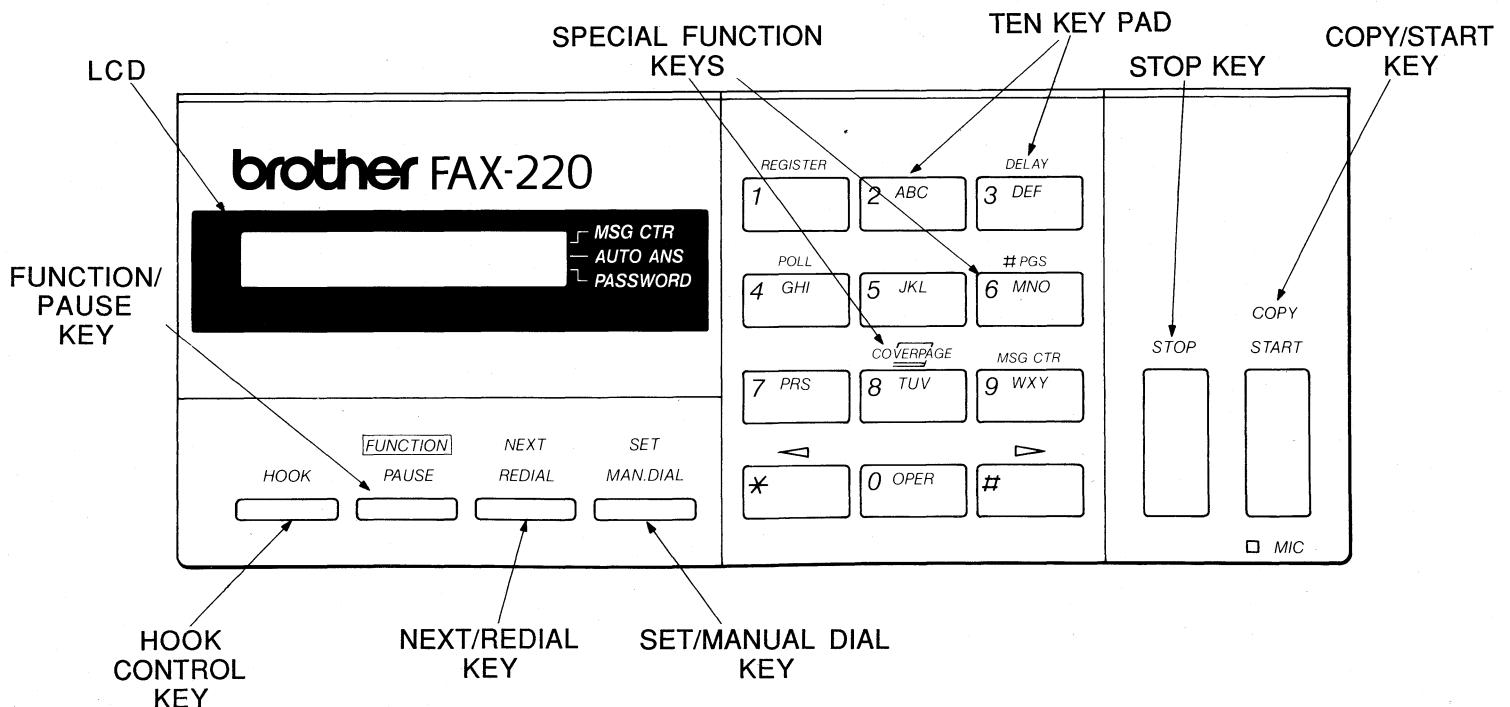
Now that the unit is connected to the telephone network and the power, take a few minutes to become familiar with the unit. The main parts of the unit and their functions are indicated in the drawing below:



NOTE: Automatic feeder tray and ADF extension are options. These kits are not included in the package.

II. THE CONTROL PANEL

Now, let's take a look at the control panel of the Brother FAX-220. The layout of the control panel is shown below. The purpose of the various buttons is described on the next page.



Operation of the control buttons and switches

START/COPY button –

COPY
START



Initiates facsimile transmission or copy operation.

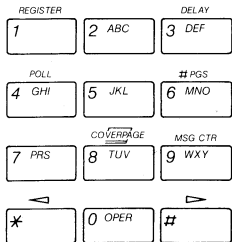
STOP button –

STOP



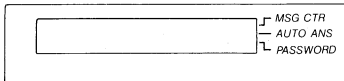
Stops any of confirming programming in the **FUNCTION SETTING** mode.
Stops copying; stops document transmission (but cannot stop reception or phone calls);
Stops continuous beeping in **ERROR**;
Confirms the elimination of abnormality (e.g., you press the **STOP** button after you change the paper roll).

TEN KEY PAD –



Initial function – one touch calling buttons (0 - 9).
Regular telephone dialing keys only *after* you press the **MAN. DIAL** button for manual dialing.
Used for registering certain items into the unit (one-touch, speed-dial, etc.)
The * and # keys control the cursor movement left and right, respectively, during certain programming operations. # is also used for speed dialing.

LCD –



Displays date and time in the standby mode.
Displays prompts during programming and operational activities of the unit.
Displays results of various operations and indicates problems/errors.
Up to 16 digits can be displayed at a time. When information contains more than 16 digits, you can press the cursor key to scroll the display (in the direction indicated by the cursor)

HOOK CONTROL –

HOOK



Pressing this button allows dialing with the handset still in **ON HOOK** status and activates the monitor so that the operation of the machine may be heard. The monitoring sound will not be heard from the speaker during dialing when you are in on-hook status.

Pressing the **HOOK** button again in the **ON-HOOK** status turns off the line.

Removing the handset from the cradle (off-hooking) while the **HOOK** button is still engaged, stops the monitoring activity of the speaker and allows you to make a phone call using the handset. During the handset-originated telephone call, the **HOOK** button will not be activated, even if pressed.

FUNCTION/PAUSE –

FUNCTION
PAUSE



The **FUNCTION** button in programming (this is its initial and major usage).

The **PAUSE** button inserts a delay in the dialing process. This function can operate only during:
– Manual dialing in automatic transmission mode
– Registration for programmed transmission.

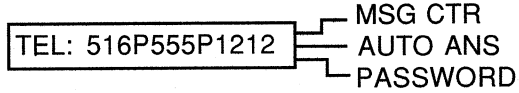
When the **PAUSE** button is pressed, the LCD displays the letter "P".

NEXT/REDIAL –



NEXT is a registration/setting button in programming.

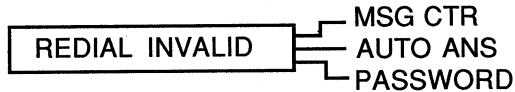
Pressing the **REDIAL** button redials a destination for which dialing has already been attempted once (allows the redialing of the previously dialed number). The LCD will display the telephone/fax number being dialed :



(when using the unit as a telephone in non-auto-dial mode, press the **MAN. DIAL** button – see below).

Pressing the **REDIAL** button causes the LCD to display the called number again.

NOTE: If the power is turned off, the REDIAL memory of the previously dialed number is lost. With the power ON, pressing the **REDIAL** button before any telephone number has been dialed, will cause the LCD to display:



SET/MANUAL DIAL –

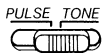


Allows to dial telephone/fax numbers manually. Use for numbers not stored in the unit's station memory. **SET** is a registration button used during programming.

NOTE: *The upper row of buttons – FUNCTION, NEXT, SET are shown in italics. More explanation on the proper use of the above control buttons will be provided in the body of this Manual in the appropriate places.*

Other controls:

TONE/PULSE –



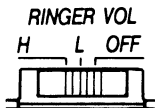
Located on the back of the unit. Allows you to set rotary or touch-tone dialing.

SPEAKER VOLUME –



Located on the back of the unit. This rotary control allows you to adjust the volume of the monitor/speaker.

RINGER VOLUME –



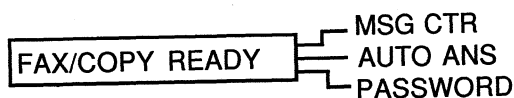
Located on the side of handset cradle, this control adjusts the loudness of the ringing.

BASIC OPERATIONS

I. THE COPY MODE

The easiest way to learn the **FAX-220** is to begin with the COPY MODE. To make a copy, follow the simple instructions below:

1. Make sure the unit is plugged in and that the LCD is in the standby mode
2. Insert the document you wish to copy into the guide of the unit, face DOWN. The LCD will display:



3. Press **START/COPY**.
4. When the unit completes copying the document, the original will be completely free of the unit. The copy will be cut automatically.

NOTE 1: **FINE** resolution is set automatically while the **FAX-220** is functioning as a copier.

NOTE 2: Warnings related to copying are on page 17.

NOTE 3: If you wish to make a copy in PHOTO mode, choose PHOTO in the TEMPORARY SETTING MODE (see p. 44).

II. HOW TO TRANSMIT DOCUMENTS

A. Preparing to transmit documents

You can start using the unit once it is plugged in, connected to the telephone network, has paper inside of it and the LCD is in the standby mode. If you are satisfied with the factory settings for various parameters (and, most of the users hardly ever have to change these settings), you can start using the machine immediately.

Basically, the only difference between transmission and copying is that for transmission you must dial a telephone number before pressing the START/COPY button!

The only programming most users do is to set the date and time and to program their fax number and name so that they appear on the received document. All other programming can be postponed for when you need some specific capability.

Also, bear in mind that the **FAX-220** has an LCD which will display helpful prompts. Furthermore, you can abort sending a document by pressing the **STOP** button.

B. Transmitting documents

Now, you are ready to transmit your document. The exact procedure for transmission depends on your selection of one of these methods:

- Manual dialing
- One-touch dialing
- Speed dialing

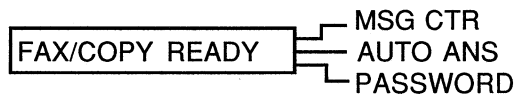
Any of these methods can be used with manual transmission or automatic transmission. If you use automatic transmission, the unit will feed your document before dialing, and will send in quick mode. It is a manual transmission if you first pick up the handset or press the **HOOK** button and then dial (either manual dialing, one-touch dialing or speed dialing). If you use one-touch dial or speed dial and then press the **START** button, this is an automatic transmission.

1. One-touch dialing

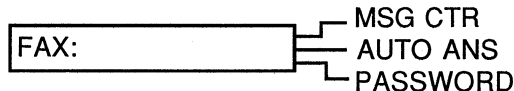
The procedure for setting up one-touch numbers (up to 10 of them) is described in the PROGRAMMING THE UNIT section of the Manual. The actual transmission procedure is :

a) Manual transmission

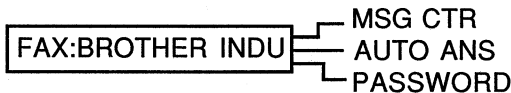
- Insert up to 5 documents into the feeder face down. The LCD shows:



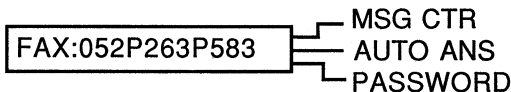
- Press **HOOK** or pick up the handset. The LCD shows:



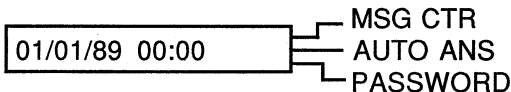
- Press the desired one-touch number using the ten key pad. If you have already registered the receiver's company name, the LCD shows the receiver's ID:



- If you have not registered the receiver's company name, the LCD shows the registered receiver's facsimile telephone number:

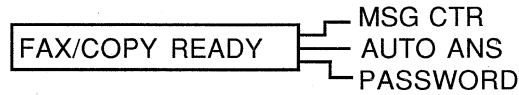


- The unit will start dialing automatically. When you hear the fax tone, press **START**. A completion tone will sound for one second after the transmission is completed. The LCD will revert to the standby mode.

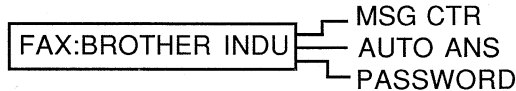


b) Automatic transmission

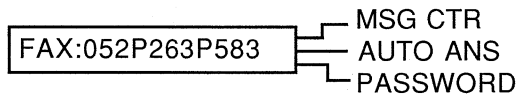
- Insert up to 5 documents into the feeder face down. The LCD shows:



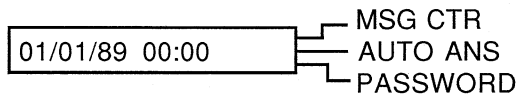
- Press the desired one-touch number using the ten key pad. If you have already registered the receiver's company name, the LCD shows the receiver's ID:



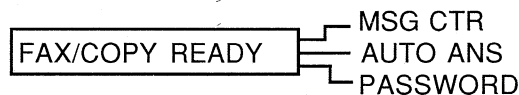
- If you have not registered the receiver's company name, the LCD shows the registered receiver's facsimile telephone number:



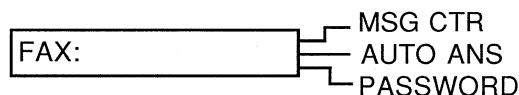
- Press **START**. The unit will start feeding a document and then start dialing, and initiate the transmission automatically. A completion tone will sound for one second after the transmission is completed. The LCD will revert to the standby mode.

**2. Speed-dialing****a) Manual transmission**

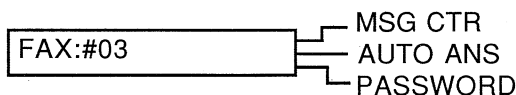
- Insert up to 5 documents into the feeder face down. The LCD shows:



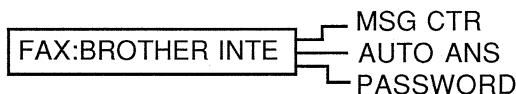
- Press **HOOK** or pick up the handset. The LCD shows:



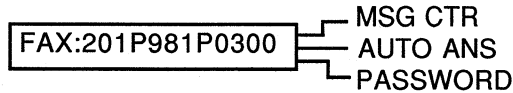
- Press # and the desired 2-digit code using the ten key pad. Example: If 03 stands for 201 981 0300, press "#", "0", and "3", and the unit will dial 201 981 0300. The LCD shows:



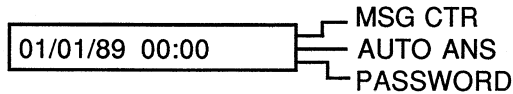
- After one second, if you have already registered the receiver's company name, the LCD shows the receiver's ID:



- If you have not registered the receiver's company name, the LCD shows the registered receiver's facsimile telephone number:

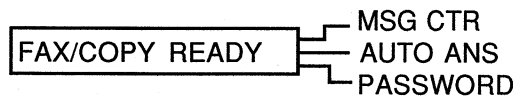


- The unit will start dialing automatically. When you hear the fax tone, press **START**. A completion tone will sound for one second after the transmission is completed. The LCD will revert to the standby mode.

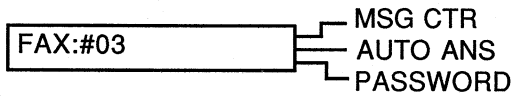


b) Automatic transmission

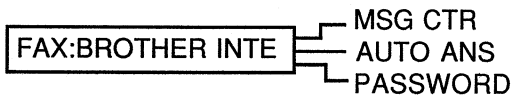
- Insert up to 5 documents into the feeder face down. The LCD shows:



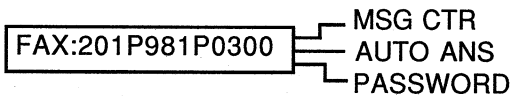
- Press # and the desired 2-digit code using the ten key pad. Example: If 03 stands for 201 981 0300, press "#", "0", and "3", and the unit will dial 201 981 0300. The LCD shows:



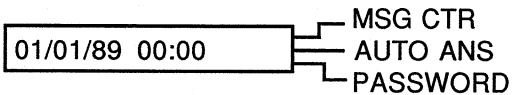
- After one second, if you have already registered the receiver's company name, the LCD shows the receiver's ID:



- If you have not registered the receiver's company name, the LCD shows the registered receiver's facsimile telephone number:



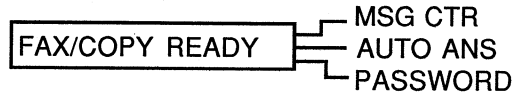
- Press **START**. The unit will start feeding a document and then start dialing, and initiate the transmission automatically. A completion tone will sound for one second after the transmission is completed. The LCD will revert to the standby mode.



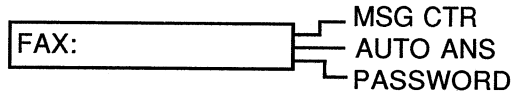
3. Manual dialing

a) Manual transmission

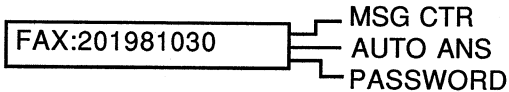
- Insert up to 5 documents into the feeder face down. The LCD shows:



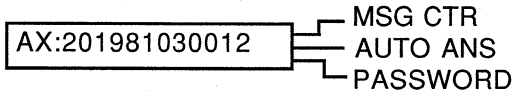
- Press **HOOK** or pick up the handset. The LCD shows:



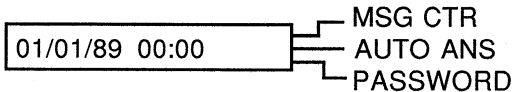
- Press **MAN.DIAL**. Dial the desired number using the ten key pad.



- If your desired number is more than 11 digits, the display will scroll, e.g.:

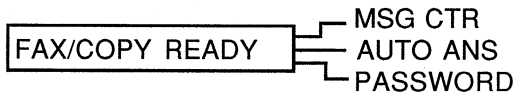


- When you hear the fax tone, press **START**. A completion tone will sound for one second after the transmission is completed. The LCD will revert to the standby mode:

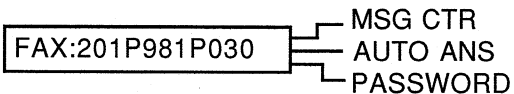


b) Automatic transmission

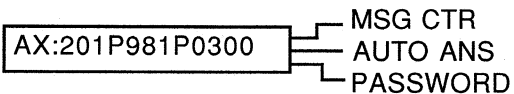
- Insert up to 5 documents into the feeder face down. The LCD shows:



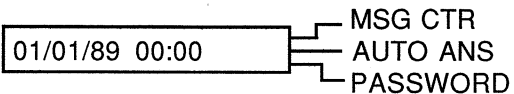
- Press **MAN.DIAL**. Dial the desired number using the ten key pad.



- If your desired number is more than 11 digits, the display will scroll, e.g.:



- Press **START**. The unit will start feeding a document and then start dialing, and initiate the transmission automatically. A completion tone will sound for one second after the transmission is completed. The LCD will revert to the standby mode.



4. Redial button

When the telephone number was dialed, the telephone number dialed will be registered in **REDIAL** button automatically.

If the number is busy in Automatic transmission, set the document in the feeder again. Document will remain in the feeder in case of Manual transmission. Press **HOOK** or pick up the handset and then press **REDIAL**. The unit will redial the last number dialed. After hearing fax tone, press **START**. When you have set Auto Redial ON, Auto Redial function is prior to Manual Redial, and Manual Redial does not work.

III. HOW TO RECEIVE DOCUMENTS

There are two methods for receiving documents with your **FAX-220** unit:

- Automatic Reception
- Manual Reception

NOTE: If a telephone connected in parallel with the unit is used during receipt of a document, the received document may include distorted characters.

A. Automatic Reception

The factory setting is for AUTO. ANSWER to be ON and for the unit to pick up the reception on the first ring. Therefore, if you are satisfied with this setting, there is *absolutely nothing* you have to do to receive documents automatically, except to make sure that the unit is plugged in and that there is enough recording paper in the unit.

If for some reason you prefer for the unit to pick up automatically on the fourth (4) ring, you can reprogram the AUTO. ANSWER function using the simple procedure described in the PROGRAMMING THE UNIT section of the Manual.

Usually, the reason for this is as follows. The fax unit is on your desk and you can pick up the phone before the unit has rung four times. If you hear a voice, you simply answer the caller. If you hear fax tones, you can receive the document manually (see below). Of course, you can leave the handset on-hook and press **HOOK**. Then you will hear the rings and the voice or fax tones over the monitor. If you hear fax tones, press **START**.

B. Manual Reception

To switch the unit to the MANUAL RECEPTION mode, you have to turn off the AUTO ANSWER mode. This is done by following the simple instructions on page 27.

When you hear a ring, pick up the handset and, if you hear a voice, start the conversation. If you hear fax tones, press **START**.

NOTE: Do not leave the document in the feeder when the unit is used to Manual reception mode. The unit can not receive document.

IMPORTANT TRANSMISSION INFORMATION:

When inserting documents into the feeder, hold the documents by both hands. Take your hands off the documents immediately once the first page of the documents has started to be fed into the feeder.

Do not transmit or copy very thick pages (over 0.12mm thick). If you have to transmit such pages, use a photocopier (not the **FAX-220**) to make a copy and transmit the copy instead.

Do not transmit or copy wrinkled, wet, or coated documents. Make a photocopy and transmit it instead.

Do not transmit or copy documents printed on thick photographic paper, metal or textiles. Make a photocopy and transmit it instead.

Do not transmit or copy documents that are too thin (tissue paper, tracing paper, etc.) The thinnest paper suitable for transmission is 0.055mm. Make a photocopy and transmit it instead.

Remove all staples and paper clips from the documents to be transmitted.

Do not transmit or copy documents held together by scotch tape. Photocopy them and transmit the photocopy.

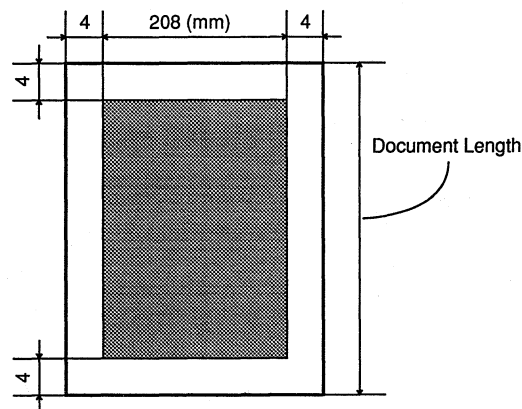
Do not load the feeder with more than five (5) documents at a time.

Transmit carrier sheets and glossy papers one at a time.

Do not transmit documents of different sizes and/or thickness together.

When transmitting more than one document at a time using the ADF, make sure that they are between 0.06 and 0.09mm thick. Otherwise, transmit one by one, or use a photocopier to make copies and transmit them instead.

Scannable area that can be guaranteed is the shaded area in the following picture.



USING THE UNIT AS A TELEPHONE

To use this unit as a telephone, you have the following choices:

- Manual dialing
- One-touch dialing
- Speed-dialing

All of these can be made in the ON-HOOK or OFF-HOOK mode. To use the three ways of dialing, follow the same instructions as for facsimile dialing, except you do not set a document into the feeder.

And the **REDIAL** function is also available.

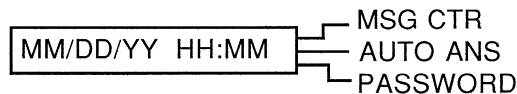
PROGRAMMING THE UNIT

THE **FAX-220** has many capabilities. These can be programmed by the user. The method for programming these will be described when we address a specific capability. Here, we will address a number of fundamental operations.

Important: Perform all programming operations without a document in the feeder.

I. SETTING THE DATE AND TIME

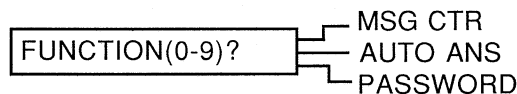
The date and time display is referred to as the *standby mode* of the LCD. When in this mode, the LCD initially displays:



The initial factory setting date and time is "01/01/89 00:00".

This will change to the actual date and time after you complete the steps below.

- Press **FUNCTION**. The unit will go into the **FUNCTION** mode and the LCD will display:

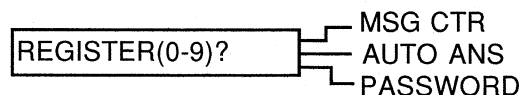


- Press **"6"**. The LCD will revert to the standby setting, except that there will be a cursor under the first "M". Input the correct 2-digit number for the month (from 01 to 12). As the month is completed, the cursor will move to the first "D" where you input the correct number for the day (01 to 31). Continue this process until the entire date and time is registered. Note that this unit uses the 24 hour clock, i.e., 9:15PM is shown as 21:15.
- Press **SET** twice. From this point on, the standby mode of the LCD will display the correct date and time.

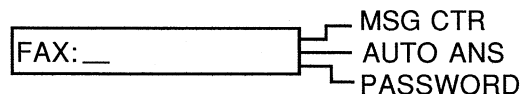
II. REGISTERING YOUR FAX TELEPHONE NUMBER ID

Your fax unit's telephone ID number is used as an RTI/TTI number to identify your messages at the remote location. When programmed, the number may be printed on documents received at the distant end. It may also appear on their LCD display or transaction journals if these are features of their equipment. You can register your telephone number up to 22 digits at a time, all 22 digits can be seen by scrolling the LCD by using the cursor keys.

- Start by putting the unit into the FUNCTION mode (see above). Press **"1"** and the unit will go into the REGISTRATION & SETTING mode and the LCD will display:



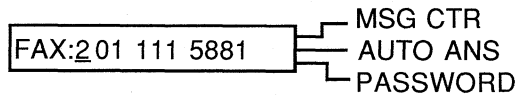
- Press **"1"**. If there is no other number registered, the LCD will display:



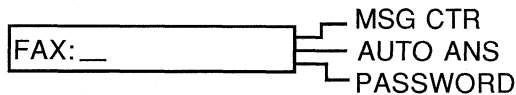
- Input the appropriate numbers by using the ten key pad. As you press a number, the digit appears at the current position of the cursor. If you wish to input a space, press the right cursor key and the cursor moves to the next position.
- When the input for fax telephone number ID has been completed, pressing **NEXT** will bring you to the COMPANY NAME/DESTINATION NAME registration. And if you do not touch any key for around 10 seconds after you have entered your fax telephone number ID, it will be automatically registered and the LCD will revert to the standby mode.

Clearing a Registered RTI/TTI number

- To clear the RTI/TTI number, bring the number up on the LCD again.

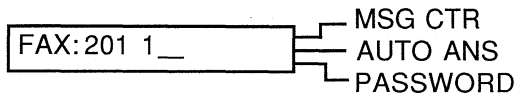


- Make sure that the cursor is under the first digit of the number, and press **PAUSE** three times. The LCD shows:



Correcting Mis-registration

- To correct an incorrect number, you can overwrite the registration, but cannot insert a number into it. For example, if you input "201 311 5881" for "201 111 5881", bring the cursor to "3". Enter "1".



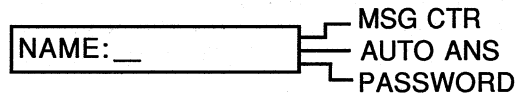
Anything to the right of the cursor will be erased.

NOTE: You may use the **PAUSE** button to insert a pause, yet this inputs a "P". Then your RTI/TTI number will appear like 201P111P5881 both on the display and in print. If you do not like this, use the cursor right key to insert a space as mentioned above.

III. REGISTERING YOUR COMPANY NAME/DESTINATION NAME

You can register up to 22 (twenty two) alphanumeric characters for your company name/ID.

- Press **NEXT** after you've registered the RTI/TTI. The LCD displays:



- Input is accomplished by using the character chart on the next page. Please note that you must use the 2-digit code for each alpha or numerical character in your station ID.
- When the input for the STATION ID has been completed, pressing **NEXT** will return you to the RTI/TTI setting. And if you do not touch any key for around 10 seconds after you have entered your STATION ID, it will be automatically registered and the LCD will revert to the standby mode.

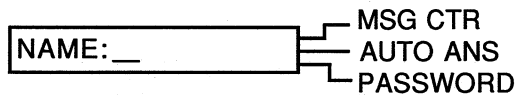
NOTE: If you have not registered the RTI/TTI number, you cannot register your company name/ID.

Clearing a Registered Company Name/Destination Name

- To clear a company name/destination name, bring the name up on the LCD again:



- Enter the 2-digit code for a blank (0,0) using the ten key pad. This erases the registration entirely. The LCD shows:



Correcting Mis-registration

- To change a character already registered, move the cursor under the character to be changed, then overwrite the character with the correct 2-digit code. For example, if you input BRATHER instead of BROTHER, bring the cursor to "A" and enter the 2-digit code for "O". The correction will be shown on the display.
- To correct a missing character, move the cursor to the place where the character is missing and put in the 2-digit code for the missing character. Then reinput all characters succeeding the missing character. For example, if you entered BRATHER and forgot the "O", move cursor under the "T" then input the 2-digit code for "O", "T", "H", "E" and "R".

Please see the chart on the following page.

CHARACTER CODE CHART

BLANK	!	"	#	\$	%	&	'
00	01	02	03	04	05	06	07
()	*	+	,	-	.	/
08	09	10	11	12	13	14	15
0	1	2	3	4	5	6	7
16	17	18	19	20	21	22	23
8	9	:	;	<	=	>	?
24	25	26	27	28	29	30	31
@	A	B	C	D	E	F	G
32	33	34	35	36	37	38	39
H	I	J	K	L	M	N	O
40	41	42	43	44	45	46	47
P	Q	R	S	T	U	V	W
48	49	50	51	52	53	54	55
X	Y	Z	[Not used]	^	_
56	57	58	59	60	61	62	63

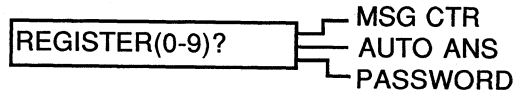
Example: BROTHER = 34, 50, 47, 52, 40, 37, 50 Example: 201 = 18, 16, 17

IV. SETTING UP THE AUTO DIALER

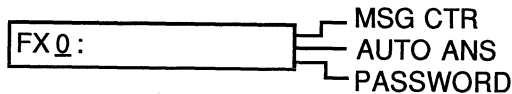
A. Registering One-Touch Numbers

You can register ten (10) **one-touch numbers** (up to 22 digits each) and **destination names** (up to 20 characters each) for convenient dialing.

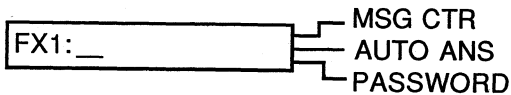
1. Press **FUNCTION** and "1". Now you are in the REGISTRATION & SETTING mode.



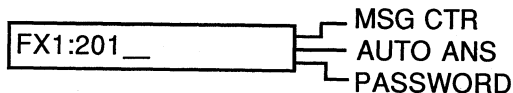
2. Press "3". The LCD will display:



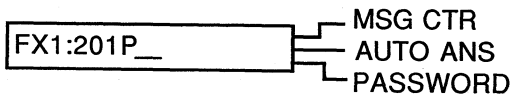
3. Select a digit from 0 to 9 under which you will register the one-touch number. For example, press "1". The cursor will move to the next digit of ":".



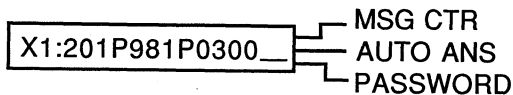
4. Use the numeric ten key pad to enter the appropriate telephone number, e.g.:



5. Use **PAUSE** to register a pause for PBX or overseas transmissions.

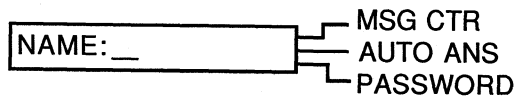


6. If you try to enter a telephone number of more than 11 digits, the display will scroll to the left.



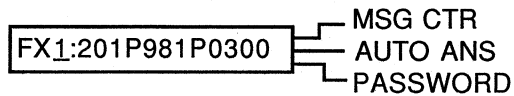
7. If you wish to add a destination name (up to 20 characters), follow the instructions in Step 8. Otherwise, if you do not touch any key for around 10 seconds, the one-touch number will be registered automatically and the LCD will revert to the standby mode.

8. Press **NEXT**. This registers the fax (telephone) number, and now you can register the name attached to the one-touch number. The LCD will show:

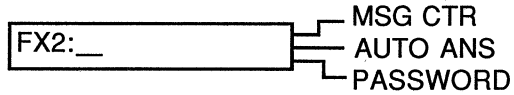


Use the chart on page 21 to input up to 20 characters.

9. To continue one-touch dial registration, press **NEXT**. The destination name is registered, and the LCD will show



10. Select another digit, for example, 2.



11. Repeat the steps 4-8.

B. Registering Speed-Dialing Numbers

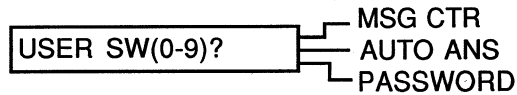
Speed-dialing numbers are registered in the same manner, except you press "4" in the REGISTRATION/SETTING mode. The display will allow you to input a 2-digit code (from 01 to 10 for each of the ten (10) speed-dial numbers. The **destination** is registered in the same manner as above using the chart on page 21.

For your convenience, you can record the one-touch and speed dial numbers on the Call Directory sheet, which can be inserted into the Original Document Tray.

V. SETTING USER SWITCHES

User Switches control a number of key parameters of the unit's operation, such as: Resolution, Contrast, Audio Beeper, Transmit report, Password Transmission, Automatic Answer and the Number of Rings on which the unit will answer automatically.

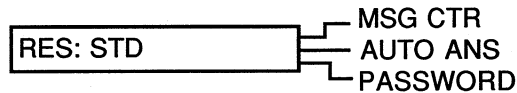
Press "7" in the FUNCTION MODE. The unit enters USER SWITCH SELECTION MODE. The LCD will display:



Pressing 1, 2, 3, 5, 6, 7,9 (4, 8, 0 are not used) will allow you to set the User Switches. To revert to standby mode from USER SWITCH SELECTION MODE, press **SET** twice.

A. Setting the Resolution

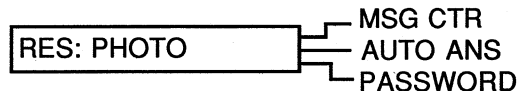
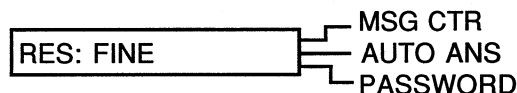
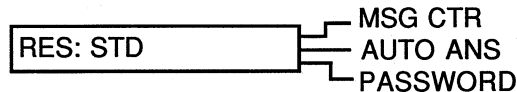
1. Press "1" in the USER SWITCH SELECTION MODE. The LCD will display:



2. Use STANDARD to transmit typewritten or printed materials. Use FINE for detailed drawings or detailed text. Use PHOTO when you need to transmit an image with many shades, such as a photograph, a colored original, etc. Please note that the transmission speed is highest at STANDARD resolution, slower at FINE and quite slow in PHOTO. Thus, use PHOTO only when warranted.

NOTE: The factory setting is STANDARD resolution.

3. Select the **RESOLUTION** mode using the cursor keys. Choose from the following displayed RESOLUTION modes:



4. If you press **SET**, the resolution is selected and the display returns to the USER SWITCH SELECTION MODE.
If you press **NEXT**, the resolution is selected and the display proceeds to the next user switch (SET THE CONTRAST).
If you press **STOP**, the display returns to the standby mode without registration.

B. Setting the Contrast

1. Press "2" in the USER SWITCH SELECTION MODE. The LCD will display:



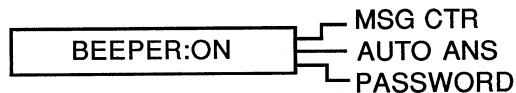
2. Select the contrast based on the contrast of the original document. That is, if the document is light, select the LIGHT setting, if the original is dark, select the DARK setting. Otherwise, leave the unit in the factory setting position – NORMAL.
3. Select the **CONTRAST** setting using the cursor keys.
4. If you press **SET**, the contrast is selected and the display returns to the USER SWITCH SELECTION MODE.
If you press **NEXT**, the contrast is selected and the display proceeds to the next user switch (TURN AUDIO BEEPER ON or OFF).
If you press **STOP**, the display returns to the standby mode without registration.

NOTE 1: When RESOLUTION is set to STD (standard), CONTRAST is automatically controlled.

NOTE 2: When RESOLUTION is set to PHOTO, CONTRAST cannot be controlled as above.

C. Turning the Audio Beeper On or Off

1. Press "3" in the USER SWITCH SELECTION MODE. The LCD will display:

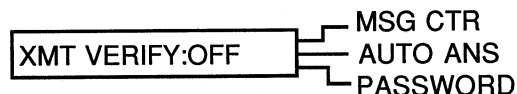


2. Select the ON or OFF setting using the cursor keys
3. If you press **SET**, the AUDIO BEEPER ON or OFF is selected and the display returns to the USER SWITCH SELECTION MODE.
If you press **NEXT**, the the AUDIO BEEPER ON or OFF is selected and the display proceeds to the next user switch (SELECT XMT VERIFICATION REPORT ON OR OFF).
If you press **STOP**, the display returns to the standby mode without registration.

D. Turning the transmit report function On or Off

To activate the XMT verification report, follow these steps:

1. Press "5" in the USER SWITCH SELECTION MODE. The LCD will display



2. Select the ON or OFF setting using the cursor keys
3. If you press **SET**, the transmit report function (XMT VERIFICATION) ON or OFF is selected and the display returns to the USER SWITCH SELECTION MODE. If you press **NEXT**, the transmit report function (XMT VERIFICATION) ON or OFF is selected and the display proceeds to the next user switch (SELECT PASSWORD TRANSMISSION MODE). If you press **STOP**, the display returns to the standby mode without registration.

```

***** XMT VERIFICATION  MM/DD/YY  HH:MM *****
*
*
*   DESTINATION      :   BROTHER INDUSTRIES
*   MODE             :   G3   STANDARD
*   PAGE(S)         :   01
*   RESULT          :   OK
*
*
***** BROTHER FAX-220 *****

```

- NOTE 1:** Only when the transmit report function (XMT VERIFICATION) is set to ON and your document was properly transmitted, the unit prints out the above report.
- NOTE 2:** If a communication error occurred, a communication error report (see p. 58) is always printed out whether the transmit report function is ON or OFF.
- NOTE 3:** If the line was busy and your document was not transmitted, neither the above report nor a communication error report is printed out.

E. Selecting the Password Transmission mode

NOTE: The FAX PASSWORD (refer page 50 SETTING THE FAX PASSWORD) permits transmission to you by units with the same matching pass-code. Use this feature if you are part of a closed network or if fax "junk mail" is a problem. Registration of the passcode is described in ADVANCED OPERATIONS below.

1. Press "6" in the USER SWITCH SELECTION MODE. The LCD will display:

```

          MSG CTR
PASSWORD:OFF ---
          AUTO ANS
          PASSWORD

```

2. Select the **ON** or **OFF** mode using the cursor keys.

```

          MSG CTR
PASSWORD:ON ---
          AUTO ANS
          PASSWORD

```

3. If you press **SET**, the PASSWORD TRANSMISSION MODE is selected and the display returns to the USER SWITCH SELECTION MODE.
If you press **NEXT**, the PASSWORD TRANSMISSION MODE is selected and the display proceeds to the next user switch (SELECT AUTO ANSWER & NUMBER OF RINGS).
If you press **STOP**, the display returns to the standby mode without registration.

If you have set Password into ON position, the LCD shows "-" at the proper position in standby mode.

```

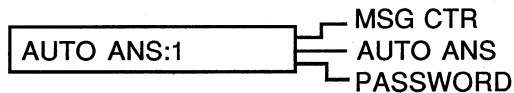
          MSG CTR
01/01/89 00:00 ---
          AUTO ANS
          PASSWORD

```

Important: Unless necessary, leave the Password Transmission OFF to permit communication with non-Brother units.

F. Selecting the Auto Answer & Number of Rings mode

1. Press "7" in the USER SWITCH SELECTION MODE. The LCD will display:

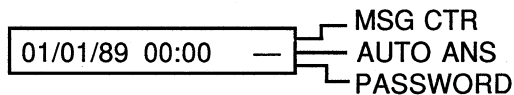


You can set the Automatic Answer to ON or OFF and in the ON position, you can have the unit answer on 1 ring or 4 rings.

"AUTO ANS:1" means the unit answers on the first ring.

2. Make your selections using the cursor keys.
3. If you press **SET**, the Auto Answer & Number of Rings are selected and the display returns to the USER SWITCH SELECTION MODE.
If you press **NEXT**, the Auto Answer & Number of Rings are selected and the display proceed to the next user switch (SETTING THE RESOLUTION).
If you press **STOP**, the display returns to the standby mode without registration.

If you have set Auto Answer into ON position (1 ring or 4 rings), the LCD shows "-" at the proper position in standby mode.



VI. THE MESSAGE CENTER

The built-in Message Center in your **FAX-220** allows you to utilize both telephone answering and facsimile capabilities on a single telephone line. Callers can even leave a voice and fax message on the same call!

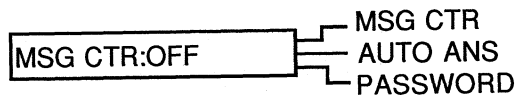
The Message Center has many features and capabilities, some of which can be found only on expensive answering machines. These features and capabilities include:

- Digital storage of incoming and outgoing messages
- User-recordable outgoing message (OGM)
- Personal memo function
- Beeperless remote control
- Call screening capability
- Toll-Saver feature
- Remote voice-fax message control
- Auto Paging

A. Turning the Message Center ON

The MESSAGE CENTER MODE can be turned ON via User Switch setting. A reminder to get into the USER SWITCH SELECTION MODE, start with the FUNCTION MODE (no document in the feeder, press **FUNCTION**), then press "7" to get into the USER SWITCH SELECTION MODE. Once in that mode:

- Press "9". The LCD will display:



- Make your selection using the cursor. Press **SET** to set the selected mode.

IMPORTANT: **MSG CTR cannot be turned ON unless the OGM has not been recorded (see p. 33).**

- Press **SET** twice to revert to standby mode.
- An indicator will also appear adjacent to the MSG CTR on the right side of the LCD when the Message Center has been turned on.

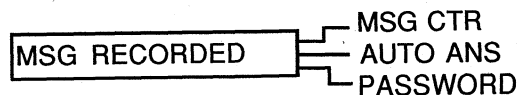
B. Using the Message Center Functions

The **FAX-220** allows you to perform a variety of programming activities to customize the performance of the Message Center to your needs. These are described below in **C**. Here, we will show you how easy it is to operate the Message Center.

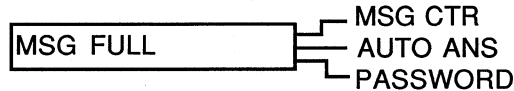
NOTE: To activate the Message Center, the OGM (Outgoing Message) must be recorded (see p.33).

Put the unit into the FUNCTION MODE (no document in the feeder and press **FUNCTION**) Press "9". The LCD will display one of the following:

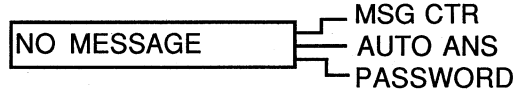
- If messages are recorded, the LCD shows,



- When messages are recorded and the memory for them is full, the LCD shows,



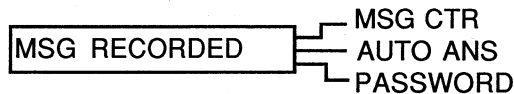
- If there are no message recorded, the LCD shows,



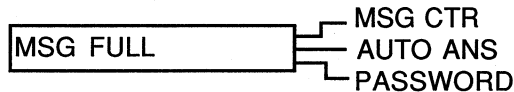
Now, we will show you how to play back and erase incoming messages(i.e., messages which were left on your unit by a caller via the telephone), and how to record, playback and erase MEMOs, (i.e.,messages which were recorded on your unit via the built-in microphone).

1. ICM Playback Procedure

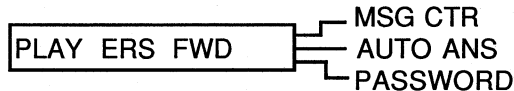
- Start with the LCD displaying:



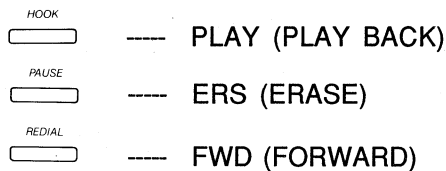
or



- Press **NEXT** to initiate ICM (Incoming Message) playback. The LCD will display:

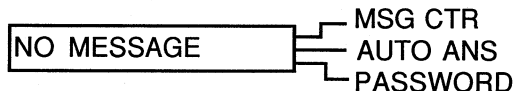


With this LCD display, the three buttons under the display change their functions as follows:



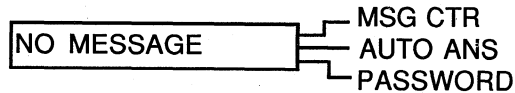
Therefore,

- Press **HOOK** to play the message. You can repeat the same message by pressing **HOOK** again.
- Press **PAUSE** to erase a message while the message to be erased is being played back. This erases one entire message at a time. If you have cleared all messages, press **SET**. The LCD will be,

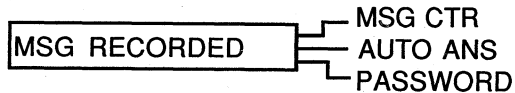


- Press **REDIAL** to forward (skip to the next message). If there is no next message, the unit will finish playing back.

- To clear the Message Center memory of all incoming messages and MEMOs, press **PAUSE** and **REDIAL** simultaneously.
- Then press **SET**. The display will change to,

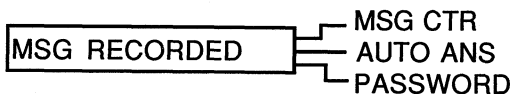


- Press **SET** to return to the original LCD display:

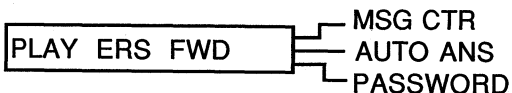


Let's take an example.

Suppose that two ICMs came in while you were out. Press **FUNCTION** and "9". The LCD shows,



Press **NEXT**. The LCD changes to:



Press **PLAY (HOOK)**. The first message is heard from the monitor. If you leave the unit as it is, the second message will follow. If you press **PLAY** again during the playback of a message, the message will be repeated from the beginning.

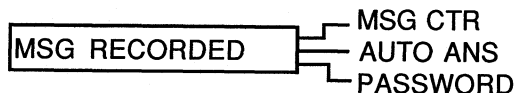
To erase a message, press **ERASE(PAUSE)** during the playback of the message.

Pressing **FORWARD** stops the playback of a message, and skips to the next message.

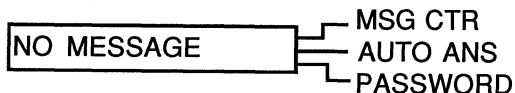
2. The MEMO Function

The MEMO function records messages directly through the built-in microphone. The unit provides you with an ability to record a voice memo which can be used by you as a memory-jogger or be accessed by a member of your family or co-worker when you are out.

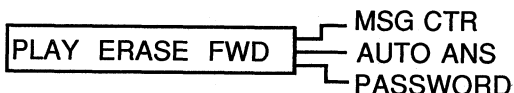
- Start with the LCD displaying:



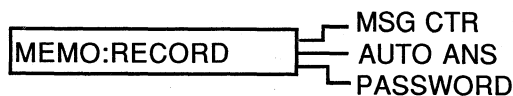
or



- Press **NEXT**. The LCD will display:



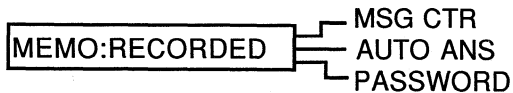
- **If you wish to record a MEMO**, press either cursor key. The LCD will display:



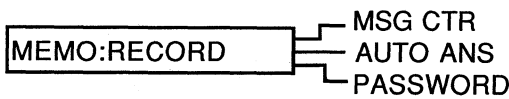
- Press **START/COPY**. The unit enters the recording mode and the LCD will display:



- Speak into the microphone. The length of a MEMO is the same as ICM (see p.43). When you have finished recording the MEMO, press **STOP**. The LCD displays:



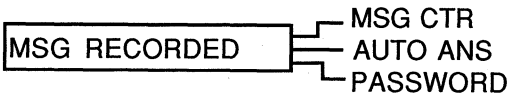
- After 2 seconds, the LCD returns to:



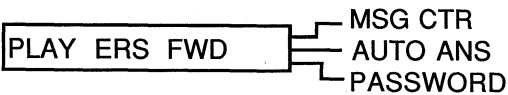
- Or if you do not press **STOP** after recording, after the selected MEMO (ICM) time runs out, the display will automatically return to:



- Press **SET** to return to the original LCD display:



- If you wish to play back MEMO's, press **NEXT**. The LCD displays the following three (3) choices:

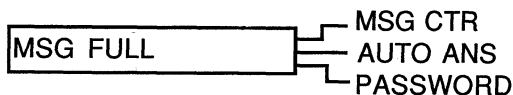


Press **PLAY (HOOK)** to playback MEMO's.

Let's take an example.

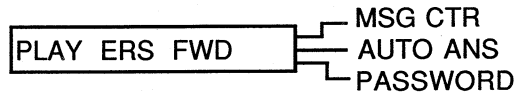
Suppose that you are in home and have an appointment at 6:00 with your husband. But you want to change the time and cannot reach him now. In such a case, you can use **the MEMO function**. Your husband can get your message recorded on your **FAX-220** using **the REMOTE OPERATION function** (see p.42) even if you are out.

Press **FUNCTION**, and select "9".



This LCD display means that the memory is full and you have to erase ICM before recording your MEMO.

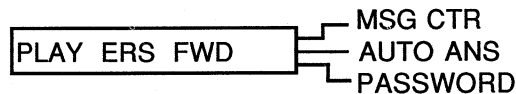
Let's listen to ICMs first. Press **NEXT**.



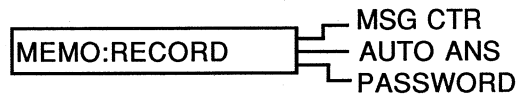
Press **PLAY**. You will hear the ICMs.

Suppose that you received three ICMs, and that you want your husband to listen to only the second ICM and your MEMO. Then you have to erase the first and third ICMs. To do that, press **PLAY** again. While the first ICM is played, press **ERASE**. And press **ERASE** during the third ICM.

Now, you can record your MEMO for your husband. With the following display, press either cursor key.



The display will change to,



Press **START/COPY**,

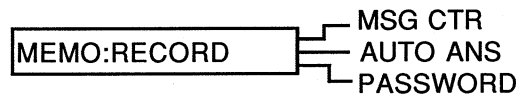


Speak into the microphone for example, "Sorry, I will see you at 6:30". Please refer to p.42 for the MEMO length.

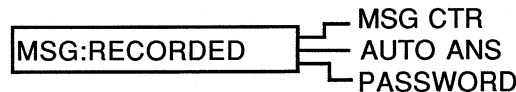
When you finish, press **STOP**. The LCD will show,



After 2 seconds, the display will revert to:



If you want to check your MEMO, press either cursor key. The LCD will change to "PLAY ERS FWD", and press **PLAY**. You will hear the second ICM and your MEMO. If it is OK, press **SET**. The LCD will change,



To return to the standby mode, press **SET** twice.

If you do not have to check your MEMO, just press **SET** three times to return to the standby mode, with the "MEMO:RECORD" display.

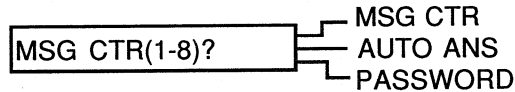
Now, your husband can reach your MEMO using the REMOTE OPERATION function.

C. Programming the Message Center and Recording the OGM

To program the Message Center, set the unit into the REGISTRATION & SETTING MODE by first getting it into the FUNCTION MODE (no document in the feeder, press **FUNCTION**) and then pressing "1".

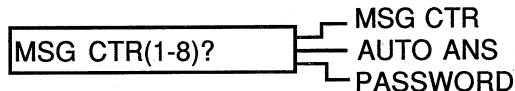
While in the REGISTRATION & SETTING MODE:

- Press "9". The LCD will display a selection. Press the appropriate number:



<u>Number pressed</u>	<u>Resultant change in the LCD</u>	<u>Function</u>
1	OGM TIME: 08	<u>Outgoing Message</u> length selection
2	OGM/MEMO:STD	Selects sound quality for OGM/MEMO/ICM
3	OGM: RECORD	Recording of OGM
4	ICM#:6	Number of <u>Incoming Messages</u> that can be recorded
5	CALL MSG: RECORD	Automatic Paging Recording
6	PAGING:OFF	Automatic Paging ON/OFF
7	MSG CTR CODE:00	Registers security code for Message Center Remote Operation
8	CALL TEL:_	Registers Automatic Paging destination telephone number

This is what happens when you press an appropriate number. The numbers are shown in the left column and the explanation of what happens is given to the right of the numbers. The first operation must start with the LCD displaying:



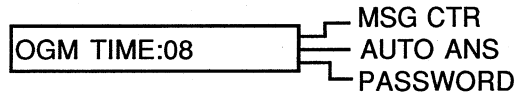
The subsequent operations can be started by using the **NEXT** key after completion of a preceding operation.

To revert to the standby mode, press **SET** three times.

EXPLANATION

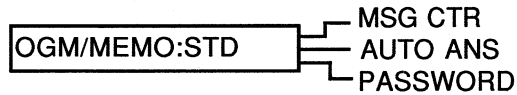
1 **Outgoing Message length selection**

The length for the Outgoing Message (OGM) is 8, 12 or 16 seconds. When you press "1", the LCD displays:

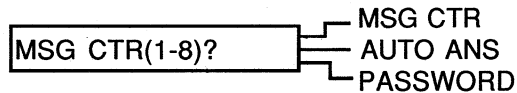


Use the cursor to select the desired OGM length, i.e., 8, 12 or 16. Input by telephone ten key is not accepted. ***The longer the OGM, the less time is available for the Incoming Messages!***

If you press **NEXT**, the OGM time selection will be registered and the LCD will prompt you to the next function (see #2 below):



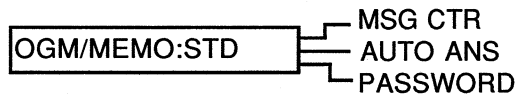
If you press **SET** instead of **NEXT** the selected OGM time will also be registered and the LCD reverts to the original:



IMPORTANT: Time for OGM cannot be changed when any ICM/MEMO is recorded.

2 **Sound quality selection**

You can vary the *voice quality* of the Message Center OGM/MEMO. The LCD displays:



or, the enhanced voice quality:

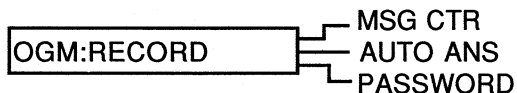


Use the cursor to select the desired voice quality.

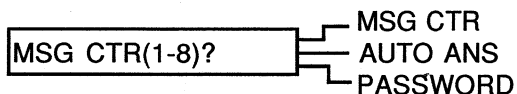
NOTE 1: If you select ENHANCED voice quality, you will cut down on the available ICM time.

NOTE 2: Voice quality cannot be changed when any ICM/MEMO is recorded.

If you press **NEXT**, the voice quality selection will also be registered and the LCD will prompt you to the next function (see #3 below):

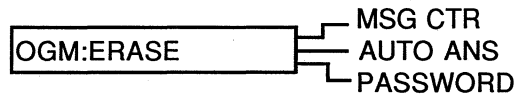
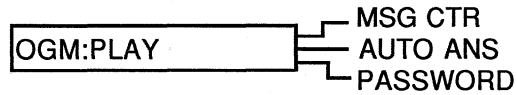
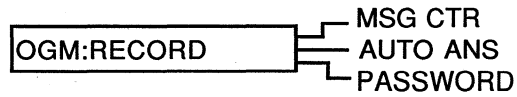


Press **SET** to register the selected voice quality and the LCD reverts to:



3 Recording of OGM

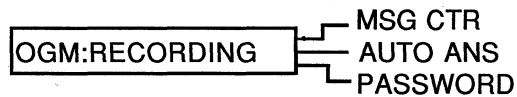
When you press "3", the LCD gives you three choices which you select using the cursor keys:



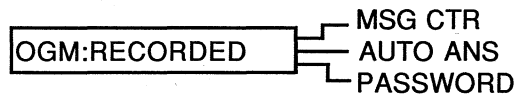
NOTE: You can not select PLAY or ERASE if you have not recorded the OGM.

(a) When you are in the OGM RECORD MODE,

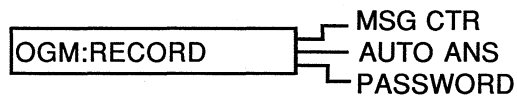
- Press **START/COPY** to record the OGM. The LCD will show:



- After recording, press **STOP** and the display will show:

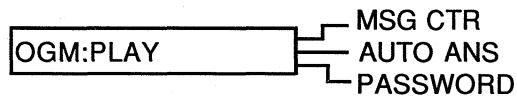


- After 2 seconds, the LCD reverts to:

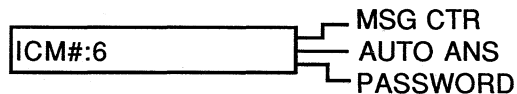


NOTE: Even if you do NOT push **STOP**, your OGM will be recorded, and the LCD will automatically revert to the above message when the selected OGM time has run out.

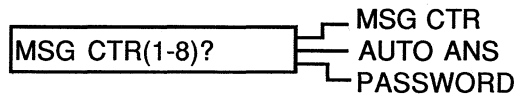
- If you wish to playback OGM, press the right cursor key.



- If you wish to go on to the next function (see #4 below), press **NEXT**. The LCD displays:

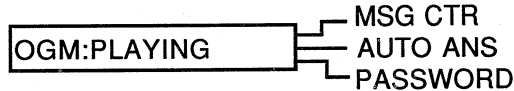


- If you are satisfied with the recording, press **SET**. The LCD displays:

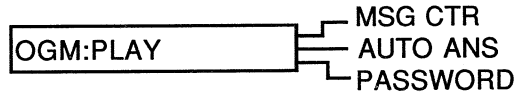


(b) When you are in the OGM PLAY MODE,

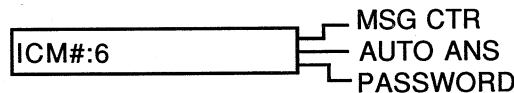
- Press **START/COPY** to play the OGM. The LCD will show:



- After listening, press **STOP** or after the selected OGM time is completed, the display will revert to:

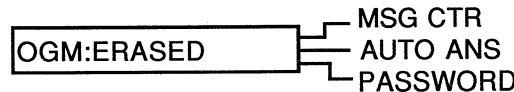


- If you wish to go on to the next function (see #4 below), press **NEXT** and the LCD will display:

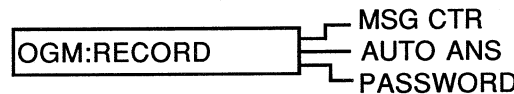


(c) When you are in the OGM ERASE MODE,

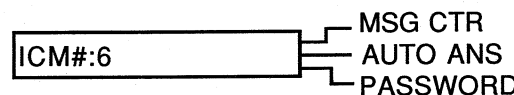
- Press **START/COPY** to erase the OGM. The LCD will show:



- After 2 seconds, the display will revert to:



- If you wish to go on to the next function, press **NEXT** and the LCD will display:

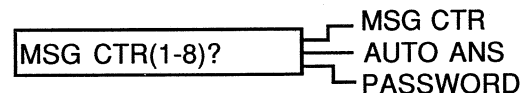


NOTE: When the OGM is erased MSG CTR MODE (see p. 28) is automatically turned OFF.

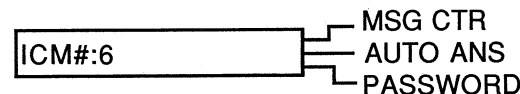
4 Number of Incoming Messages that can be recorded

Selecting the Incoming Message (ICM) number automatically determines the amount of time available for each message. The more messages, the less time per message. You have approximately 2 minutes of OGM/ICM/MEMO capacity. This can be used for 3 to 6 messages. Furthermore, the longer the Outgoing Message the shorter the total amount of time available for ICM (for instance, if you have a 16 second OGM, you have only 107 seconds). The selection of the numbers is done as follows:

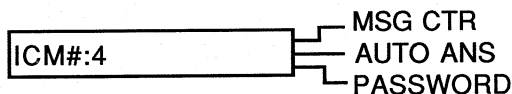
- If you are doing this before any of the above-described operations, you start with the LCD displaying:



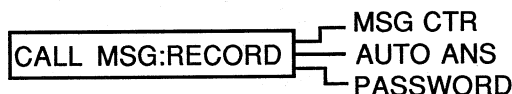
- Press "4". The LCD will display:



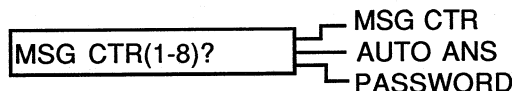
- Use the cursor keys to select the number of ICMs, for instance:



- If you wish to go on to the next operation (see #5 below), press **NEXT** and the LCD will display:



- Pressing **SET** instead of **NEXT** will register your selection and the LCD will revert to:



IMPORTANT: If you change the ICM number, OGM is automatically cleared.

5 Automatic Paging Recording

The Auto Page function is used as follows. Suppose you are away from your home or office but are expecting an important call. All you have to do is to turn on the Auto Page Function on your fax unit and register a number at which you can be reached. Once the Message Center of your unit records a telephone call, the unit will call the registered number and when you pick up the phone you hear the **CALL MESSAGE**. Thus, you'll know that there is a recorded message on your facsimile's Message Center. In this step, we are showing you how to turn this function ON.

You have to record CALL MESSAGE before you turn the Auto Page function ON. The CALL MESSAGE is to inform you that you have received ICMs when you are away from home or office. You can record the CALL MESSAGE up to five (5) seconds.

- Press "5". The LCD will display:



- Using the cursor keys, you can select three (3) courses of action:

(a) Call Message RECORDING,

- Here the LCD initially displays:



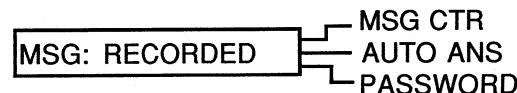
- Pressing **START/COPY** puts the unit into a recording mode and the LCD displays:



A sample CALL MESSAGE is shown below:

"Could you get Mr. Mike Smith from Brother on the phone, please?"

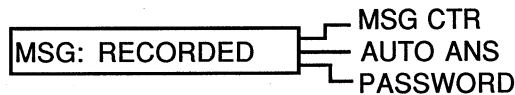
- After recording the message, press **STOP**. The LCD will display:



- After 2 seconds, the LCD returns to:



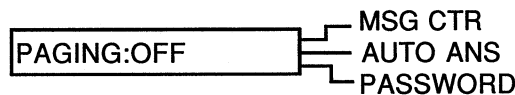
- Even if you do not press **STOP**, the LCD will automatically change to:



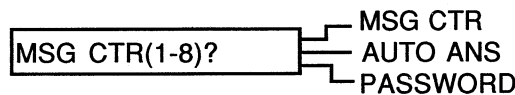
- And after two seconds the LCD changes to:



- If you wish to go on to the next operation (see #6 below), press **NEXT** and the LCD will display:



- Pressing **SET** will register your choice and the LCD will revert to:



(b) Call Message PLAYBACK,

- Here the LCD initially displays:



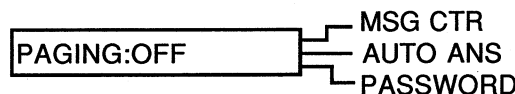
- Pressing **START/COPY** puts the unit into a playback mode and the LCD displays:



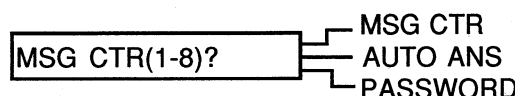
- After playing the message, press **STOP** or simply wait. The LCD will display:



- If you wish to go on to the next operation (see #6 below), press **NEXT** and the LCD will display:



- Press **SET** and the LCD will revert to:

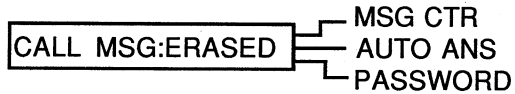


(c) Call Message ERASE,

- Here the LCD initially displays:



- Pressing **START/COPY** puts the unit into an erase mode and the LCD displays:

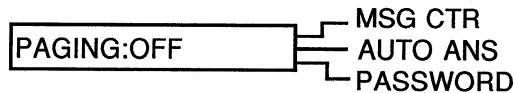


- Press **STOP** or simply wait 2 seconds. The LCD will display:

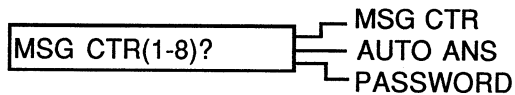


NOTE: When the CALL MESSAGE is erased, the AUTO PAGE FUNCTION is automatically turned OFF. If you are going to record a new CALL MESSAGE, be sure to turn ON the AUTO PAGING again.

- If you wish to go on to the next operation (see #6 below), press **NEXT** and the LCD will display:



- Press **SET** and the LCD will revert to:

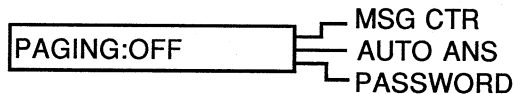


6 Automatic Paging ON/OFF

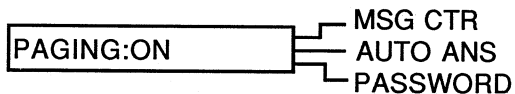
Now that the AUTO PAGING is turned ON, your unit will give you a call to inform that there is a recorded phone call.

IMPORTANT: You have to program CALL TEL number before setting AUTO PAGING function (see below 8).

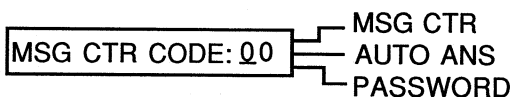
- After you've accessed this function by pressing "6", the LCD will display:



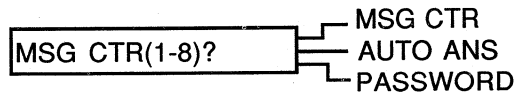
- Use the cursor keys to turn this function **ON**. The LCD will display:



- If you wish to go on to the next operation (see #7 below), press **NEXT** and the LCD will display:

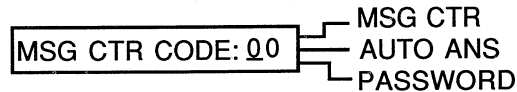


- Pressing **SET** will register your choice and the LCD will revert to:

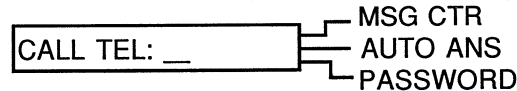


7 Registering security code for Message Center Remote Operation

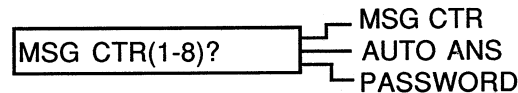
To help you register a *security code*, the LCD will display, either by pressing "7" in the "MSG CTR (1 - 8)?" choice or after you've pressed **NEXT** in the previous operation:



- Enter an appropriate 2-digit code.
- If you wish to go on to the next operation (see #8 below), press **NEXT** and the LCD will display:

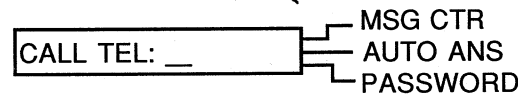


- Press **SET** and the LCD will revert to:

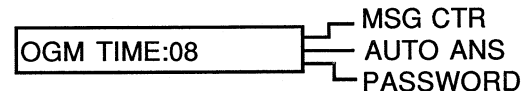


8 Registering Automatic Paging destination telephone number

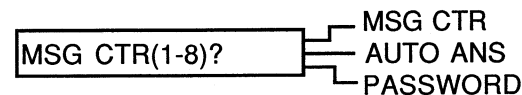
Either by pressing "8" in the MSG CTR (1 - 8)? mode or by pressing **NEXT** in previous operation, get the LCD to display:



- This allows you to program the telephone number at which the unit can call you using the AUTO PAGE function.
- Use the ten key pad to input the number (up to 22 digits).
- If you wish to go back to the very first operation (see #1 above), press **NEXT** and the LCD will display:



- Press **SET** and the LCD will revert to:



D. The Message Center and the Auto-Receive Functions

If you have set both the Message Center and the AUTO ANSWER functions to OFF on your **FAX-220** and someone is calling your unit, the unit will, after 15 rings:

- Enter the MESSAGE CENTER ON MODE after 15 rings if the OGM is recorded and the ICM is **not** full. The OGM will start after 15 rings. After completion of this call, the unit will revert to its original status — MESSAGE CENTER OFF and AUTO ANSWER OFF.
- or
- Enter the AUTO ANSWER mode if the OGM is not recorded or the ICM is full.

E. Toll-Saver feature

This function works on the **FAX-220** in the MESSAGE CENTER MODE as follows. The MESSAGE CENTER will answer your call on:

- 3 rings if there is no message – then, after 3 rings the OGM will go on. Thus, unless you wish to record a message on your unit via the remote MESSAGE CENTER feature, you can hang up before the 3rd ring and save the cost of a completed phone call.
- 1 ring if there is a message or messages. The OGM will start after 1 ring and you can use remote control procedures to pick up the message.
- 1 ring if the ICM is full. Then, after 1 ring, Auto Answer will go on.

F. Call Screening

You can screen the incoming call via the monitor and this allows you to answer the call after you have known who is calling or, if it is a facsimile transmission (which you will know as soon as you hear the fax tones), you can let the unit accept the facsimile transmission in either the automatic or the manual modes (depending on your preference).

G. Remote Operation of the Message Center

The messages recorded on your **FAX-220** Message Center can be retrieved from any touch-tone telephone, provided, you know the 2-digit security code. To do so, press "9" when you hear the OGM (your Outgoing Message) or Call Message.

1. Dial the telephone number of your **FAX-220** unit.
2. When you hear the **OGM**, press "9" repeatedly until you hear a short beep (1 second).
3. Dial in the 2-digit Security Code within 15 seconds of hearing the beep. If the code is correct, you will hear a short beep (1 second). If the code is incorrect, you will hear a series of short beeps. Try again!

Now, you are ready to request the **FAX-220's** Message Center to perform some functions. These functions and the remote commands needed to activate them are shown in the table below.

<u>FUNCTION</u>	<u>COMMAND</u>	<u>DESCRIPTION</u>
Play back message/memo	9 + 22	
		<ul style="list-style-type: none"> • Pressing "2" while a message/memo is being played will bring you forward to the next message/memo. • Pressing "3" while a message/memo is being played will erase the message/memo being played.
Erase all message/memo	9 + 25	
Record memo	9 + 36	
Record/Change OGM	9 + 46	
Playback OGM	9 + 42	
FAX message count	9 + 52	Maximum of 255 messages are counted. The counter is cleared each time the unit is set to Message Center.
VOICE message count	9 + 53	Counts the number of ICM/memo in Message Center.
Message Center ON	9 + 62	Turns Message Center on.
Message Center OFF	9 + 63	Turns Message Center off.
Auto Paging ON	9 + 72	Turns Auto Paging on.
Auto Paging OFF	9 + 73	Turns Auto Paging off.
Terminate Remote Control	9 + 88	Terminates the operation. If you do not order this termination, the unit will cut the connection automatically in 30 seconds unless you issue another command.

NOTE 1: If there are no messages on your Message Center and you try to play back or erase ICMs, you will hear a series of short beeps.

NOTE 2: A short beep is heard repeatedly for 30 seconds when each function has been completed. To continue with another function, press "9" within 30 seconds after a 1 sec. beep.

The FAX MESSAGE COUNT is a feature unique to Brother. Its main purpose is to save you a trip to check on the arrival of that important fax message you've been waiting for. When the FAX message count command is entered, as many number of short beeps as fax messages received will be heard. If the count is zero, there is no need to rush back.

H. Fax transmission

The **FAX-220** is unique among facsimile machines in that a caller, even with a fax message can hear your voice (provided the MSG CTR is ON). This is illustrated in the sample OGM below:

"This is (your name / company name). Sorry, we are not available now. Leave a message after the tone. You have 17 seconds for your message. If you wish to send us a facsimile message, push the "8" button on your telephone keypad when you hear our message or simply hit the **START** button after the second tone."

NOTE: The OGM can say "25 seconds" instead of "17 seconds" or whatever number you've selected. The method of selection is discussed below. The timing (i.e., 25 seconds or 17 seconds) refers to the length of the ICM - the Incoming Message, i.e., the message left by a caller on your Message Center.

When the caller presses the "8" button within five(5) seconds after hearing your OGM, the **FAX-220** will change from MSG CTR MODE to facsimile mode. If the "8" button is not pushed, the unit will beep and the caller can record a message. After the caller's message is recorded, the unit beeps again and the unit goes into the fax mode. If no fax message is forthcoming within 30 seconds, the **FAX-220** releases the phone line.

The Message Center function of the **FAX-220** is an enhancement of the unit's facsimile capabilities. Even through the unit cannot record very long messages (as can be done on traditional answering machines), the **FAX-220** offers remarkable flexibility with a high quality Message Center. Since the initial connection is the most expensive part of the phone call, the roll over from Message Center to FAX saves money because it allows Message Center and facsimile functions to be performed on one phone call.

I. The length of ICM/MEMO

The OGM, ICM and MEMO utilize the same memory and the relation of their length is as shown below:

Sound Quality	OGM length (second)	ICM number	EACH ICM length (second)
STANDARD	8	6	19.2
	8	5	23.0
	8	4	28.8
	8	3	38.3
	12	6	18.5
	12	5	22.2
	12	4	27.8
	12	3	37.0
	16	6	17.8
	16	5	21.4
	16	4	26.8
	16	3	35.7
ENHANCED	8	6	9.3
	8	5	11.1
	8	4	13.4
	8	3	18.5
	12	6	8.6
	12	5	10.3
	12	4	12.9
	12	3	17.2
	16	6	7.9
	16	5	9.5
	16	4	11.9
	16	3	15.8

ADVANCED OPERATIONS

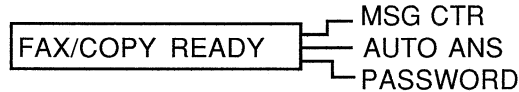
I. TEMPORARY REGISTRATION SETTINGS

While you may be satisfied with the programmed settings of the unit for virtually all of your operations, there may be instances when you wish to change one or more of the settings. For example, normally, you use STANDARD RESOLUTION. However, you have to transmit a photograph. Since this is likely to be a rather infrequent type of transmission, you might wish to change it for the duration of this one transmission only. This is accomplished via *temporary settings*. After the completion of the transmission, the unit automatically reverts to your permanent settings (either the ones you've programmed or the factory settings if you left those).

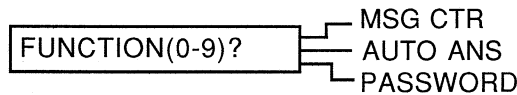
REMINDER: You can set the RESOLUTION and CONTRAST in two ways -- Temporary or Permanent (See p.24 ~ 25). The difference when setting is whether you put a document in the feeder (temporary) or not (permanent). The Temporary Registration Settings are valid only for as long as the document for which they were set is being transmitted. Once the transmission has been completed, the settings will revert to the User Switch Settings or to the factory settings (if you did not program your own).

A. Making Temporary Settings

1. **Set a document into the feeder.** If you do not do so, you will NOT be able to access the menu for making temporary settings. Instead, you will get the normal FUNCTION MODE menu which you've used while getting ready to program the unit. With the document in the feeder, the LCD will display:



2. Press **FUNCTION**. The LCD will display:



3. Now, you have a choice as to which setting you wish to change **for this transmission only**.

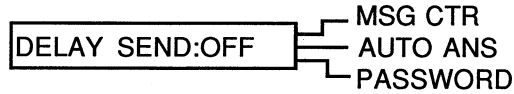
<u>Number to press</u>	<u>What will this do for this transmission only</u>
1	Lets you change the <i>resolution</i> : STD, FINE, PHOTO
2	Lets you change the <i>contrast</i> : NORMAL, LIGHT, DARK
3	Delayed transmission
4	Polling (called side)
5	NOT USED
6	ON/OFF toggle switch for <i>total number of pages sent</i>
7	NOT USED
8	ON/OFF toggle switch for COVERPAGE™ function
9	ON/OFF toggle switch for <i>call pickup alert</i>
0	ON/OFF toggle switch for <i>callback message</i>

In virtually all of these cases, the actual procedures for altering settings are identical to the ones described for making permanent settings (see PROGRAMMING THE UNIT). The new settings, e.g., COVERPAGE™ function, Call Pickup Alert and CALLBACK message are explained below.

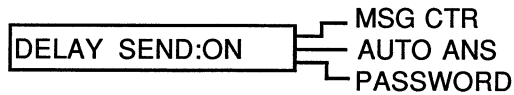
B. Delayed Transmission

After you've set a document into the feeder and pressed **FUNCTION** to obtain the temporary **FUNCTION MODE**, you can press "3" to temporarily set the unit up for **delayed transmission**. This setting can program your unit to fax a document *automatically* in a few minutes, a few hours or even as late as 7 days, 23 hours and 59 minutes away!

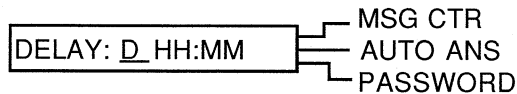
- Pressing **3** will result in the following LCD display:



- Press a cursor key. The LCD changes to:



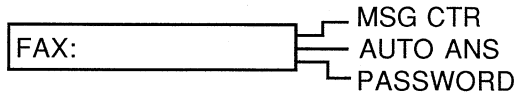
- Press **SET** to obtain the following LCD display:



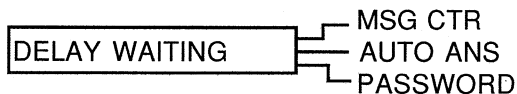
- Use the ten key pad to enter the appropriate time over the cursor. For D (day), enter number from 0 to 7, where 0 is today, 1 is tomorrow, 4 is four days from now.

For example, if you enter "1 12:30", your document will be transmitted at 12:30 the next day.

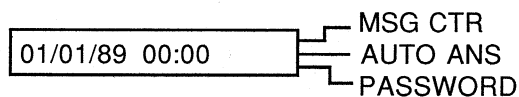
- Press **SET** to register this time into the unit's memory.
- Press **SET** and the LCD will display:



- Dial the number and press **START**. The LCD will display:



Now, you can walk away from the unit. The FAX-220 will transmit the document which is in the ADF automatically at the time which you have set. Should you change your mind about sending this document, return to step 1 by pressing **FUNCTION** and "3". Then select "DELAYSSEND:OFF", press **SET** twice and press **STOP**. Now, the document will be removed.



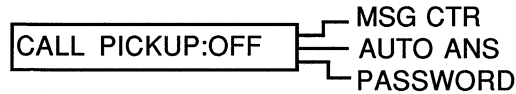
NOTE: When DELAY SEND is set to ON, DELAYED POLLING cannot be accomplished.

C. Call Pickup Alert

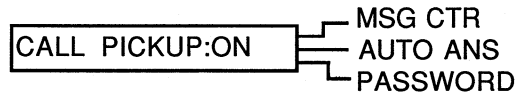
This function works when your unit is transmitting to another unit. It is designed to tell the recipient that you want to talk to him after the completion of the message and before the units are either automatically or manually disconnected from each other.

For this function to operate, place originals into the feeder. The unit must be placed into the Temporary Function Mode prior to the initiation of transmission by pressing **FUNCTION**.

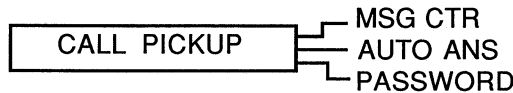
- Once in Temporary Function Mode, press "9". The LCD will display:



- Select ON or OFF using the cursor keys.



- Press **SET** to register this setting.
- Press **SET**. Dial and start the fax transmission.
- When the fax transmission is completed, the receiver's facsimile will sound as if a new telephone call is being received. If receiver answers, your unit will also sound as if a new telephone call is being received. Pick up your handset. The LCD of the unit will change to:



You can now start using the unit as a conventional phone to talk to the receiver.

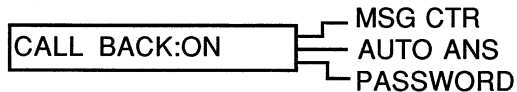
D. Callback Message

This function is used when there is no response to the Call Pickup request. The **CALLBACK** message function is a way of telling the other person that you want to talk to him or her. There are two distinct ways of sending a callback message:

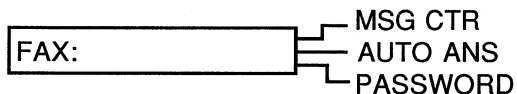
- Sending it as a completely separate transmission
- Tacking it on to a document that is being transmitted as an additional page.

1. Sending the Callback Message as a separate transmission

- Starting in the standby mode (date and time displayed on the LCD), press **FUNCTION**.
- Once in the **FUNCTION MODE**, press "0". The LCD will display:



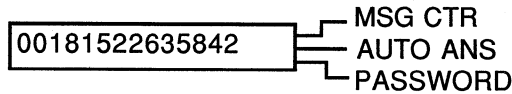
- Press **SET**. The LCD changes to:



- Enter the fax number and press **START**. You can enter the fax number using one of the following:

Manual dial:	press MAN.DIAL button
One-touch dial:	enter 0 to 9
Speed dial:	press #, and enter 01 to 10

- When the transmission has started, the LCD shows the receiver's fax number:



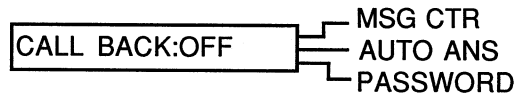
There are several things to keep in mind:

- Program your fax number and destination name (see p. 20).
- If you did NOT register the receiver's name (company name) along with his one-touch or speed-dial number (as explained on page 22), or if you are using manual dialing, the identification of destination will NOT be printed, but only the fax number will be printed.

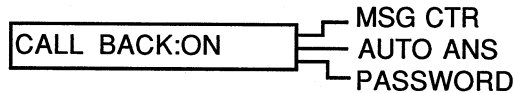
NOTE: This function can only be performed in this manner if there is no document in the document feeder.

2. Tacking on the Callback Message as the Last Page of a Transmitted Document

- Once in the Temporary Function Mode, press "0". The LCD will display:



- Select the ON or OFF setting using the cursor keys:



- Press **SET** to register this setting.
- Press **SET**. Dial and start the fax transmission.

The following is an example of the Callback Message:

```

          === CALL BACK MESSAGE ==
TO:          BROTHER INDUSTRIES
      FAX:    001-81-52-263-5842
FROM:        BROTHER INTERNATIONAL
      FAX:    201-828-5881
PLEASE CALL AT (FAX): 201-828-5881
                    brother
  
```

- NOTE 1:** When you set CALL PICKUP ON, you can not set CALLBACK MESSAGE ON. Remember that if you could not talk to your destination using the CALL PICKUP function, the unit will automatically send a callback message.
- NOTE 2:** When you set CALLBACK MESSAGE ON, you can not set CALL PICKUP ON.
- NOTE 3:** When you use CALLBACK function, setting the number of rings of AUTO ANSWER at 4 rings at each fax terminal is recommended. This is because when someone calls you back, while the AUTO ANSWER is set at 1, your fax machine will enter the message receiving condition if you do not pick up the handset before the second ring.

E. Printing the Total Number of Pages Transmitted

This function works only in the *temporary setting mode*. It is designed to tell the recipient how many pages were transmitted to his fax unit. This will enable him to check whether all of the transmitted pages were received.

- Place the document into the feeder.
- Press **FUNCTION**.
- Once in Temporary Function Mode, press 6. The LCD will display:

#PGS:OFF	MSG CTR
	AUTO ANS
	PASSWORD

- Select the ON or OFF setting using the cursor keys.
- With the function ON the LCD will display:

#PGS:TOTAL_00	MSG CTR
	AUTO ANS
	PASSWORD

- Enter a number from 01 to 99.
- Press **SET** to register this setting.
- Press **SET**. Dial and start the fax transmission.

F. COVERPAGE™

This unique Brother function adds an electronic cover page to the faxed document, thus alleviating the need to write or type a fax cover page. When this function is activated, as described below, the following cover page will automatically appear:

=== COVER PAGE ==

TO:	<u>BROTHER INDUSTRIES</u>
FAX:	001-81-52-263-5842
FROM:	<u>BROTHER INTERNATIONAL</u>
FAX:	201-828-5881

05 PAGE[S] TO FOLLOW

COMMENT:	URGENT
----------	--------

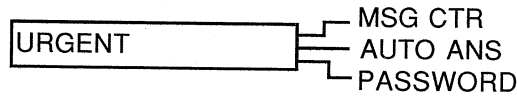
brother FAX COVERPAGE

For this function to operate, place a document into the feeder. Press **FUNCTION**. The unit is now placed in the Temporary Function Mode.

- Once in the Temporary Function Mode, press "8". The LCD will display:

COVERPAGE: OFF	MSG CTR
	AUTO ANS
	PASSWORD

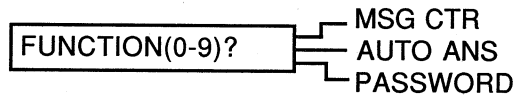
- Use the cursor keys to turn this function ON and press **SET**. The LCD will display one of the six (6) pre-programmed comments or COMMENT OFF selection, for instance:



- Select **NO COMMENT** or any of the six available messages to go onto the cover page by pressing a cursor key repeatedly until the desired message appears:

- | | | |
|-----------------------|--------------------|------------------|
| 1. NO COMMENT | Appears on LCD as: | COMMENT:OFF |
| 2. URGENT | Appears on LCD as: | URGENT |
| 3. CONFIDENTIAL | Appears on LCD as: | CONFIDENTIAL |
| 4. FOR DISTRIBUTION | Appears on LCD as: | FOR DISTRIBUTION |
| 5. PLEASE CALL | Appears on LCD as: | PLEASE CALL |
| 6. ORDER CONFIRMATION | Appears on LCD as: | ORDER CONFIRMATI |
| 7. PER YOUR REQUEST | Appears on LCD as: | PER YOUR REQUEST |

- Press **SET** and the LCD will revert to:



- Press **SET**. Dial and start fax transmission.

Here is an explanation of the above example of the COVERPAGE™:

		<u>Explanation</u>
TO:	<u>BROTHER INDUSTRIES</u>	— Destination name
FAX:	201-81-52-263-5842	— Destination fax number from one-touch or speed-dial memory
FROM:	<u>BROTHER INTERNATIONAL</u>	— Your company name
FAX:	201-981-0300	— Your company fax number
05 PAGE[S] TO FOLLOW		— Total page count (optional)
COMMENT:	URGENT	— Selectable message

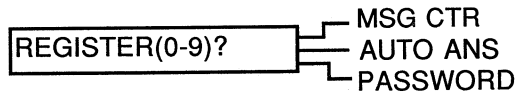
NOTE: The total number of pages will NOT be included unless you've registered it as described on page 48.

II. SETTING THE FAX PASSWORD

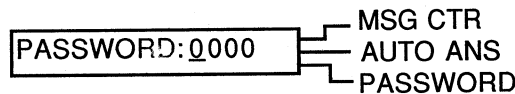
- The Fax Password permits transmission to you only by units with the same matching passcode.
- Use the Fax Password feature if you are part of a closed network or if fax "junk mail" is a problem.

The factory setting for this FOUR-DIGIT CODE is 0000.

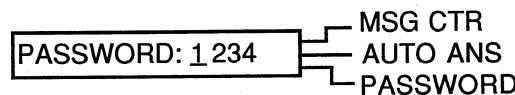
1. Start in the REGISTRATION & SETTING MODE (press **FUNCTION** and "1") where the LCD displays:



2. Press "6". The LCD will display:



3. Use the numeric ten key pad to enter numbers other than "0000", e.g.,



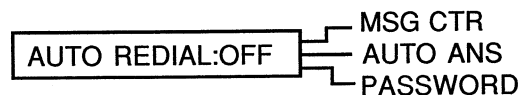
When you finish entering the fourth digit of the passcode, the cursor will go back to the first digit.

4. If you are pleased with your selected number, press **SET** and the unit will return to the REGISTRATION & SETTING MODE.
5. If you wish to change the password, re-enter appropriate numbers at Step 3, using the ten key pad. When satisfied, press **SET**.
6. Press **SET** twice. The unit will revert to standby mode.

III. AUTO REDIAL FUNCTION

The Auto Redial function allows you to keep on redialing a busy fax number up to 3 times by a 5-minute interval.

1. Enter the REGISTRATION & SETTING MODE.
2. Press "7". The LCD will display:

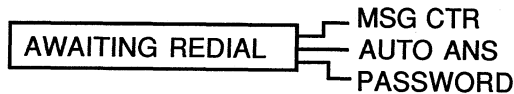


3. Using the cursor keys to turn AUTO REDIAL ON.
4. Press **SET** to register this setting. This turns on the Auto Redial function.
5. Press **SET** twice. The unit will revert to standby mode.

NOTE: This function will work only when sending a document in Automatic transmission mode.

To use this mode while faxing, follow this procedure:

1. Set the document into the feeder and dial the desired fax number using Automatic transmission method. (Don't use manual transmission method. See p. 12)
2. If the number is busy, the LCD will display:



3. If the remote fax terminates its previous communication and accept your unit's call, the transmission will proceed in the normal manner. If the remote unit remains busy for the duration of all redial attempts, the connection will be terminated and the LCD will return to the standby mode. You can also terminate the redial attempts by taking your document out of feeder by pressing **STOP**.
4. When the unit is awaiting redial, if the unit receives another fax call, REDIAL setting will be cleared and the unit will print out COMMUNICATION ERROR REPORT.

IV. THE POLLING FUNCTION

The **FAX-220** is capable of performing polling. Polling involves the call for transmission of a document already in the feeder of a facsimile machine. There are two possibilities:

- **You want your unit to be polled**

That is, you set a document in the feeder of your unit, another fax unit can call up your **FAX-220** and cause it to transmit that document. Of course, *both units have to be set up for polling for this to happen*. Even though it is your unit that does the transmission, the telephone charges are paid by the receiving unit.

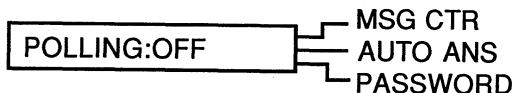
- **You want to poll another unit**

That is, you wish to receive a document that is set in the feeder of a remote fax unit.

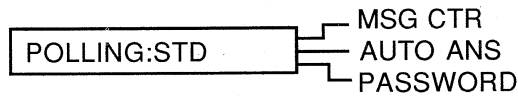
A. Setting Up Your Unit to be Polled

To prepare your facsimile unit to be polled, *have the a document to be polled in the feeder*, and get the unit into the FUNCTION MODE by pressing **FUNCTION**.

1. Press "4". The LCD will display:



2. Use the cursor keys to select simple polling (simple polling means that a single document is sent to a single receiver over a single telephone line). The LCD will display:



3. Press **SET** twice. The LCD will display:



The unit is now ready to be polled by a remote facsimile machine.

Should you change your mind about being polled, return to step 1 by pressing **FUNCTION** and "4". Next, select "POLLING:OFF", press **SET** twice and then press **STOP**. Now, the document will be removed.

NOTE 1: Callback Message, COVERPAGE™, and Call Pickup Alert cannot be used with POLLING.

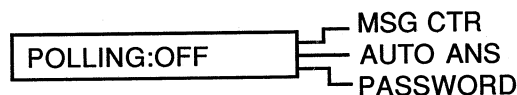
NOTE 2: Total number of pages to be transmitted can be set.

NOTE 3: If the unit is waiting to be polled, do not press **HOOK** or pick up the handset when it rings.

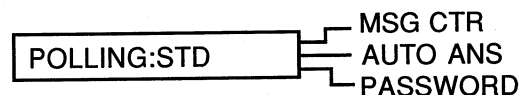
B. Setting Your Unit to Poll Another Fax Unit

Make sure there is NO document in your feeder. While in the FUNCTION MODE (press FUNCTION),

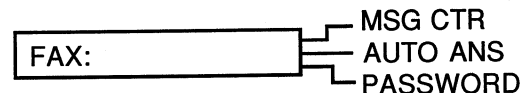
1. Press "4". Your unit goes into a POLLING REQUEST MODE. The LCD will display:



2. Use the cursor keys to select simple polling (simple polling means that a single document is sent to a single receiver over a single telephone line). The LCD will display:



3. Press **SET** once. The LCD will request the fax number to be polled and display:



4. Input the numbers using the ten key pad. To dial manually, press **MAN.DIAL** first.

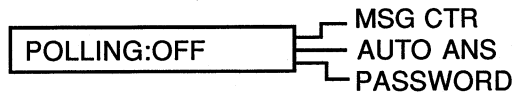
5. Press **START** and the unit will commence polling. The document will now be received by your unit.

NOTE: If the remote fax unit did not have its polling function activated, your polling request will be unsuccessful and the LCD will revert to the standby mode (where it displays the date and time).

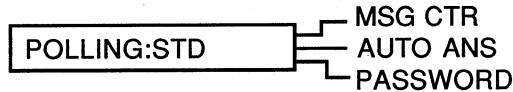
C. Delayed Polling

To set the unit into the Delayed Polling Mode start in the FUNCTION MODE by pressing **FUNCTION** without a document in the feeder.

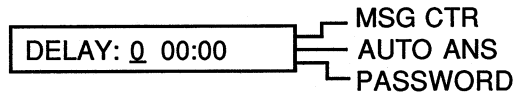
1. Press "3". Your unit goes into a POLLING REQUEST MODE. The LCD will display:



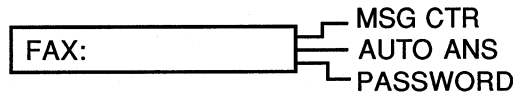
2. Use the cursor keys to select simple polling. The LCD will display:



3. Press **SET**. The LCD will display:



4. Input the time at which delayed polling is to take place. The setting procedure is the same as Delayed Transmission (p.45)
5. Press **START**. The LCD will request the fax number to be polled and display:



6. Input the numbers using the ten key pad. To dial manually, press **MAN.DIAL** first.
7. Press **START** and the unit is ready to poll at the specified time. The LCD will display:



NOTE 1: Only manual transmission (see p. 12) and normal reception are possible while the unit is waiting for the right time to start polling. Automatic transmission cannot be used.

NOTE 2: While waiting for polling, Automatic Paging function does not work.

The *Speed-Dial* list looks as follows(an example):

```
***** SPEED DIAL LIST****MM/DD/YY HH:MM *****
*
*
*
*      NO.      DIAL      DESTINATION NAME
*      (01)     212P555-1212    NYC TEL INFO
*      (02)     201P981-0300    BROTHER INT
*      (03)     516P751-1552    MEADOWS COMM.
*      (04)     617P555-1212    BOSTON INFO
*      (05)     516P555-1212    LI TEL INFO
*      (06)
*      (07)
*      (08)
*      (09)
*      (10)
*
*
***** BROTHER FAX-220 *****
```

REMINDER: To use speed dialing you need to press the "#" key plus the appropriate 2-digit code (01 – 10).

The *User Soft Switch* list looks as follows (these are factory settings):

```
***** SYSTEM CONFIGURATION LIST****MM/DD/YY HH:MM *****
*
*
*      USER SWITCHES
*
*      0.      NOT USED
*      1.      RESOLUTION MODE      :      STANDARD
*      2.      CONTRAST CONTROL     :      NORMAL
*      3.      BEEPER                :      ON
*      4.      NOT USED
*      5.      XMT VERIFICATION      :      OFF
*      6.      PASSWORD              :      OFF
*      7.      # OF RINGS IN AUTO ANS :      1
*      8.      NOT USED
*      9.      MESSAGE CENTER        :      OFF
*
*      PARAMETER
*
*      RTI AND TTI                  :      201 981 0300
*      STATION ID                   :      BROTHER INTERNATIONAL
*      PASSWORD                     :      1234
*      AUTO REDIAL                   :      RINGS=ON
*      MESSAGE CENTER                :      OGM TIME=8 (s)
*                                  :      SOUND=STANDARD
*                                  :      ICM#=3
*      AUTO PAGE                    :      SECURE CODE=00
*                                  :      OCCURRENCE=OFF
*                                  :      TEL#=0123456789
*
***** BROTHER FAX-220 *****
```

VI. UNDERSTANDING AUDIO SIGNALS

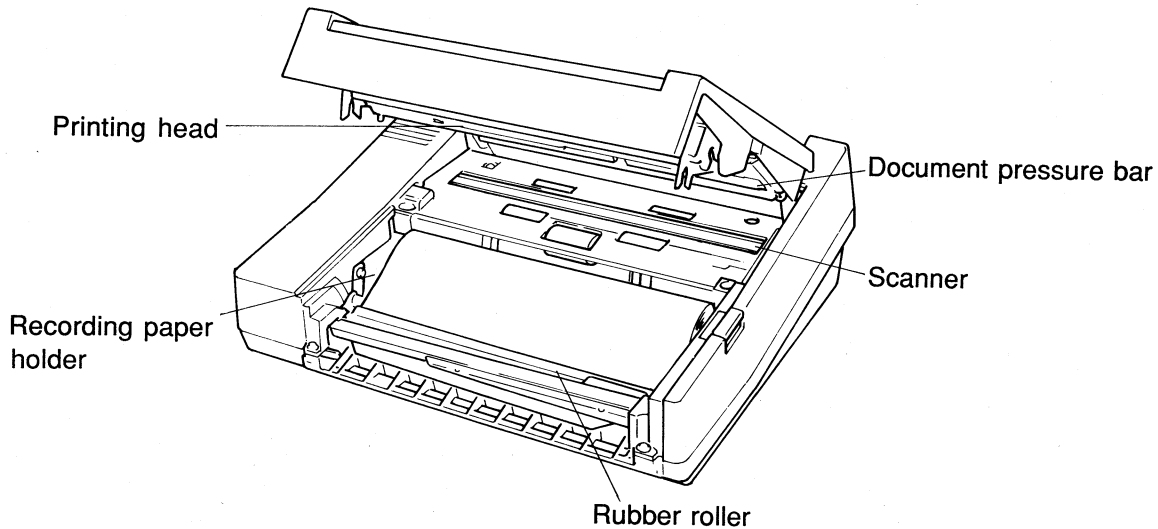
The FAX-220 emits several tones:

- Touch tone – is heard when you press a ten-key. This is a short tone (0.1 sec.).
- Rejection tone – is heard when you press a key that cannot be accepted by the unit. This tone sounds for approximately half a second.
- Completion tone – is heard when a transmission, reception or copy is completed. This tone is twice as loud as the rejection tone and lasts about a second.
- Alarm tone – is heard when a communication error has been detected. It lasts for about 6 seconds at half-second intervals. It is as loud as the Rejection tone.
- is heard when an equipment error has been detected or the unit runs out of paper. It lasts for about 6 seconds continuously and is as loud as the Completion tone.

CARING FOR YOUR FAX-220

Optimum print quality can be maintained if the scanning and printing area are cleaned after using three or four rolls of recording paper. The procedure is explained below:

WARNING: Unplug this product from the wall jack when cleaning.



I. CLEANING THE PRINTING AREA

- Remove the recording paper roll from the unit.
- Using an applicator or a soft cloth soaked in alcohol, gently remove any dirt from the printing head. Do not use organic solvents, such as benzene or thinner.
- Use a dry cloth to gently wipe off any dirt from the rubber roller and the recording paper holder.

II. CLEANING THE SCANNING AREA

- Using an applicator or a soft cloth soaked in alcohol, gently remove any dirt from the scanner and the document pressure bar. Do not use organic solvents, such as benzene or thinner.

III. CLEANING THE BODY OF THE UNIT

- Use a dry cloth to gently wipe off any dirt from the body of the unit. Remove visible dirt and dust.
- Do not use water, alcohol, thinner or any other organic solvent.

ERROR MESSAGES

1. Equipment error

The following error messages are displayed on the LCD when the appropriate equipment errors occur:

<u>LCD reads:</u>	<u>Error / Malfunction</u>
ADD PAPER	No recording paper
CLOSE/PRESS STOP	Cover is open
PRINTER ERROR	Recording error
SCANNER ERROR	Reading error
PAPER JAM	Paper jamming

When any of these errors occur, the buzzer beeps for 6 seconds continuously.

2. Communication error

When a communication error occurs, the buzzer beeps intermittently for 6 seconds and the LCD displays a message, "COMM ERROR". A report is printed by the unit:

```
***** COMMUNICATION ERROR REPORT MM/DD/YY HH:MM *****
*
*
*           DESTINATION:      :      BROTHER INDUSTRIES      *
*           MODE:             :      G3 STANDARD              *
*           ERROR PAGE       :      01                       *
*           RESULT           :      NG                        *
*
*
***** BROTHER FAX-220*****
```

The number in **ERROR PAGE** shows that the page of that number and the pages after it were not transmitted properly. For example, if you transmitted 3 pages and the number in **ERROR PAGE** is 02, only the first page was transmitted properly, and the second and third pages were not.

If the unit detects the black mark on the paper indicating the approaching end of the roll, the LCD will display: **ADD PAPER**. However, even if a new roll is inserted, the report or list will not be outputted any more. When red stripe appears on the paper, make sure to replace the old paper roll with new one.

NOTE: If the document is not fed out of the unit when the LCD displays "COMM ERROR", press **STOP** to feed out the document.

3 Power interruption

When a power interruption occurs, information on Delayed Transmission might be erased. In such a case, a "POWER INTERRUPT REPORT" is automatically outputted.

TROUBLESHOOTING

If you are having trouble with the image quality in TRANSMIT or RECEIVE modes, try the unit in the COPY mode. If this test gives you a good reproduction, the problem is not with your unit but with the other unit or the telephone lines.

If this GUIDE does not help you in solving a problem with your unit, please call our service at: 1-800-284-4 FAX.

1. Transmission

Symptom	Possible Cause	Action
Document jam	Jam in transmitting section	Press recording paper cover button and open the cover. Remove the jammed document or recording paper. Close the cover. Make sure you hear it click into place.
Document not feeding properly	Cover isn't closed securely Document's left edge doesn't align with document guide Document is too thick/thin/ wet/wrinkled/curled/torn/ too small	Push the cover shut until you hear a click. Reset the document to align with the guide. Make a copy of the document using a photocopier and fax the copy.
Documents are impossible to feed	Documents are inserted from stacker	Insert documents from the front side.
Password transmission error	Password of the receiver is set to OFF Passwords do not match Receiving fax doesn't have Password function	Contact the receiver.
Image quality of the transmitted document is poor	Problem with the receiver Scanning head is dirty Scanning head is bad	Use your fax to make a copy. If copy quality is good, the problem is with the receiver Clean the scanning head as described above. Call Brother service center.
Documents you sent are received blank	Document is set face-up in the feeder	Set the document face down in the feeder.
Auto Transmission is not working	You auto-dialed a wrong number (not a fax number) Delayed sending is set.	Check the fax number registration in your auto dial memory. Use manual transmission.

2. Reception

Symptom	Possible Cause	Action
Manual reception doesn't work	Document left in the unit	Remove the document.
Recording paper is jammed	Recording paper is set wrong Papers jammed in receiving section Documents are not sent correctly	Reload the paper roll correctly. Remove the jammed paper. Contact the sender.
Received copies are blank	Recording paper roll has been inserted backwards Documents are not sent correctly	Reload the paper roll correctly. Check with the sender.
The telephone rings continuously	No recording paper roll Auto answer is OFF The cover is not closed properly	Load new paper roll. Turn AUTO ANS ON. Push the cover shut until you hear a click.
Image quality isn't good	Wrong type of paper is used Printing area is dirty	Replace with proper thermal paper. Clean the printing head as described above.

Problems that may occur during COPYING are virtually identical to the problems discussed above.

ONE-TOUCH TELEPHONE DIRECTORY

ONE-TOUCH NUMBER	TELEPHONE NUMBER	NAME
0		
1		
2		
3		
4		
5		
6		
7		
8		
9		

SPEED DIAL TELEPHONE DIRECTORY

ONE-TOUCH NUMBER	TELEPHONE NUMBER	NAME
01		
02		
03		
04		
05		
06		
07		
08		
09		
10		

SPECIFICATIONS

Type:	Desktop facsimile transceiver
Compatibility:	CCITT Group 3
Coding method:	Modified Huffman (MH)
Modulation:	CCITT V.27 ter and a V.29 modem (9600 bps)
Document input size:	8.5"
Recording paper size:	8.5"x98.4'
Recording paper type:	Thermal roll
Effective scanning width:	8.2"
Effective recording width:	8.2"
Scanner type:	Contact Image Sensor (CIS)
LCD:	16 digits x 1 line
Recorder type:	Line, thermal
Resolution:	Standard Mode – 203x98 lines/inch; Fine Mode – 203 x 196 lines/inch Photo Mode – 203 x 196 lines/inch
Contrast control:	Normal, Light, Dark
Document feeder:	5 pages
Document cutter	Automatic
Gray scale:	16 shades
Telephone function:	Built-in handset
Message Center	Yes
OGM sampling rate	16/32 kbps
OGM time	8/12/16
ICM recording time	max. 115 seconds
ICM selection	3 - 6
Dialing method:	Selectable tone/pulse
One touch:	10 numbers up to 22 digits
Speed dial:	10 numbers up to 22 digits
Speaker type:	Monitor
Power source:	110-120 VAC, 60Hz
Communications source:	Public Switched Telephone Network
Connection requirements:	USOC RJ11C modular jack or equivalent
Power consumption:	Standby: under 12 watts; Peak: under 120 watts
Operating environment:	44°F to 95°F
Dimensions:	16.4" x 11.2" x 5"
Weight:	12.6 lb

Specifications are subject to change without notice





